

Appendix 3 Excludes studies and studies with high risk of bias/Bilaga 3 exkluderade studier och studier av låg kvalitet

Excluded studies, page 1–35

Systematic review 35

Studies with high risk of bias, page 36–38

Excluded studies	
The Observatory. Genetic Testing. MLO: Medical Laboratory Observer, 2013; 45 (1): 6-6.	Not relevant study design: comment
Ahn JW,Bint S,Irving MD,Kyle PM,Akolekar R,Mohammed SN, et al. A new direction for prenatal chromosome microarray testing: software-targeting for detection of clinically significant chromosome imbalance without equivocal findings. PeerJ, 2014; 2e354.	Not relevant PICO: intervention
Alesi V,Bertoli M,Sinibaldi L, Novelli A. The clinical utility and indications of chromosomal microarray analysis in prenatal diagnosis. Bjog, 2013; 120 (1): 119-20.	Not relevant study design: comment
Armengol L,Nevado J,Serra-Juhe C,Plaja A,Mediano C,Garcia-Santiago FA, et al. Clinical utility of chromosomal microarray analysis in invasive prenatal diagnosis. Hum Genet, 2012; 131 (3): 513-23.	Not relevant PICO: intervention
Avent ND. Refining noninvasive prenatal diagnosis with single-molecule next-generation sequencing. Clin Chem, 2012; 58 (4): 657-8.	Not relevant study design : editorial
Bao B,Wang Y,Hu H,Yao H,Li Y,Tang S, et al. Karyotypic and molecular genetic changes associated with fetal cardiovascular abnormalities: results of a retrospective 4-year ultrasonic diagnosis study. Int J Biol Sci, 2013; 9 (5): 463-71.	Not relevant PICO: Intervention

<p>Bayindir B, Dehaspe L, Brison N, Brady P, Ardui S, Kammoun M, et al. Noninvasive prenatal testing using a novel analysis pipeline to screen for all autosomal fetal aneuploidies improves pregnancy management. <i>Eur J Hum Genet</i>, 2015.</p>	<p>Not relevant PICO: outcome</p>
<p>Benachi A, Letourneau A, Kleinfinger P, Senat MV, Gautier E, Favre R, et al. Cell-free DNA analysis in maternal plasma in cases of fetal abnormalities detected on ultrasound examination. <i>Obstet Gynecol</i>, 2015; 125 (6): 1330-7.</p>	<p>Not relevant PICO: outcome</p>
<p>Bernhardt BA, Soucier D, Hanson K, Savage MS, Jackson L, Wapner RJ. Women's experiences receiving abnormal prenatal chromosomal microarray testing results. <i>Genet Med</i>, 2013; 15 (2): 139-45.</p>	<p>Not relevant PICO: intervention</p>
<p>Bi W, Breman A, Shaw CA, Stankiewicz P, Gambin T, Lu X, et al. Detection of ≥ 1Mb microdeletions and microduplications in a single cell using custom oligonucleotide arrays. <i>Prenat Diagn</i> 2012; 32 (1): 10-20.</p>	<p>Not relevant PICO: population</p>
<p>Bianchi DW, Wilkins-Haug L. Integration of noninvasive DNA testing for aneuploidy into prenatal care: what has happened since the rubber met the road? <i>Clin Chem</i>, 2014; 60 (1): 78-87.</p>	<p>Not relevant study design</p>
<p>Biesecker LG, Green RC. Diagnostic clinical genome and exome sequencing. <i>New England Journal of Medicine</i>, 2014; 370 (25): 2418-25.</p>	<p>Not relevant study design: comment</p>
<p>Blackburn HL, Schroeder B, Turner C, Shriver CD, Ellsworth DL, Ellsworth RE. Management of Incidental Findings in the Era of Next-generation Sequencing. <i>Curr Genomics</i>, 2015; 16 (3): 159-74.</p>	<p>Not relevant PICO: intervention</p>
<p>Bouffard C, Viville S, Knoppers BM. Genetic diagnosis of embryos: clear explanation, not rhetoric, is needed. <i>CMAJ: Canadian Medical Association Journal</i>, 2009; 181 (6-7): 387-91.</p>	<p>Not relevant study design</p>
<p>Bovolenta M, Rimessi P, Dolcini B, Ravani A, Ferlini A, Gualandi F. Prenatal diagnosis of Duchenne muscular dystrophy by comparative genomic hybridization. <i>Clin Genet</i>, 2010; 77 (5): 503-6.</p>	<p>Not relevant study design: case report</p>

<p>Brady PD,DeKoninck P,Fryns JP,Devriendt K,Depest JA, Vermeesch JR. Identification of dosage-sensitive genes in fetuses referred with severe isolated congenital diaphragmatic hernia. <i>Prenat Diagn</i>, 2013; 33 (13): 1283-92.</p>	<p>Not relevant PICO: intervention</p>
<p>Brady PD,Delle Chiaie B,Christenhusz G,Dierickx K, Van Den Bogaert K,Menten B, et al. A prospective study of the clinical utility of prenatal chromosomal microarray analysis in fetuses with ultrasound abnormalities and an exploration of a framework for reporting unclassified variants and risk factors. <i>Genet Med</i>, 2014; 16 (6): 469-76.</p>	<p>Not relevant PICO: intervention</p>
<p>Brady PD,Devriendt K,Depest J, Vermeesch JR. Array-based approaches in prenatal diagnosis. <i>Methods Mol Biol</i> 2012; 838:151-71.</p>	<p>Not relevant study design</p>
<p>Brady PD, Vermeesch JR. Genomic microarrays: a technology overview. <i>Prenat Diagn</i>, 2012; 32 (4): 336-43.</p>	<p>Not relevant study design</p>
<p>Breman A,Pursley AN,Hixson P,Bi W,Ward P,Bacino CA, et al. Prenatal chromosomal microarray analysis in a diagnostic laboratory; experience with >1000 cases and review of the literature. <i>Prenat Diagn</i>, 2012; 32 (4): 351-61.</p>	<p>Not relevant PICO: intervention</p>
<p>Burnell L,Verchere C,Pugash D,Loock C,Robertson S,Lehman A, et al. Additional post-natal diagnoses following antenatal diagnosis of isolated cleft lip +/- Palate. <i>Archives of Disease in Childhood: Fetal and Neonatal Edition</i>, 2014; 99 (4): F286-F90.</p>	<p>Not relevant PICO: intervention</p>
<p>Bustamante-Aragones A,Rodriguez de Alba M,Perlado S,Trujillo-Tiebas MJ,Arranz JP,Diaz-Recasens J, et al. Non-invasive prenatal diagnosis of single-gene disorders from maternal blood. <i>Gene</i> 2012; 504 (1): 144-9.</p>	<p>Not relevant study design</p>
<p>Callaway JL,Huang S,Karampetsou E, Crolla JA. Perspective on the technical challenges involved in the implementation of array-CGH in prenatal diagnostic testing. <i>Mol Biotechnol</i> 2014; 56 (4): 312-8.</p>	<p>Not relevant PICO: outcome</p>

<p>Callaway JL,Shaffer LG,Chitty LS,Rosenfeld JA, Crolla JA. The clinical utility of microarray technologies applied to prenatal cytogenetics in the presence of a normal conventional karyotype: a review of the literature. <i>Prenat Diagn</i>, 2013; 33 (12): 1119-23.</p>	<p>Not relevant PICO: intervention</p>
<p>Canton AP,Costa SS,Rodrigues TC,Bertola DR,Malaquias AC,Correa FA, et al. Genome-wide screening of copy number variants in children born small for gestational age reveals several candidate genes involved in growth pathways. <i>Eur J Endocrinol</i> 2014; 171 (2): 253-62.</p>	<p>Not relevant PICO: population</p>
<p>Carey L,Scott F,Murphy K,Mansfield N,Barahona P,Leigh D, et al. Prenatal diagnosis of chromosomal mosaicism in over 1600 cases using array comparative genomic hybridization as a first line test. <i>Prenat Diagn</i>, 2014; 34 (5): 478-86.</p>	<p>Not relevant PICO: intervention</p>
<p>Carss KJ,Hillman SC,Parthiban V,McMullan DJ, Maher ER,Kilby MD, et al. Exome sequencing improves genetic diagnosis of structural fetal abnormalities revealed by ultrasound. <i>Hum Mol Genet</i>, 2014; 23 (12): 3269-77.</p>	<p>Not relevant PICO: population</p>
<p>Cavalli P,Cavallari U, Novelli A. Array CGH in routine prenatal diagnosis practice. <i>Prenat Diagn</i> 2012; 32 (7): 708-9; author reply 11-2.</p>	<p>Not relevant study design: letter</p>
<p>Chan K,Yam I,Leung KY,Tang M,Chan TK, Chan V. Detection of paternal alleles in maternal plasma for non-invasive prenatal diagnosis of beta-thalassemia: a feasibility study in southern Chinese. <i>Eur J Obstet Gynecol Reprod Biol</i>, 2010; 150 (1): 28-33.</p>	<p>Targeted prenatal genetic testing for a specific aberration</p>
<p>Char D. Preventive Genomic Sequencing and Care of the Individual Patient. <i>American Journal of Bioethics</i>, 2015; 15 (7): 32-3.</p>	<p>Not relevant study design</p>
<p>Charan P,Woodrow N,Walker SP,Ganesamoorthy D,McGillivray G, Palma-Dias R. High-resolution microarray in the assessment of fetal anomalies detected by ultrasound. <i>Aust N Z J Obstet Gynaecol</i>, 2014; 54 (1): 46-52.</p>	<p>Not relevant PICO: intervention</p>

Chen CP,Chang SD,Chueh HY,Su YN,Su JW,Chern SR, et al. Rapid positive confirmation of trisomy 21 mosaicism at amniocentesis by interphase FISH, QF-PCR and aCGH on uncultured amniocytes. Taiwan J Obstet Gynecol, 2012; 51 (3): 475-80.	Not relevant study design: case study
Chen CP,Su YN,Chern SR,Chen YT,Su JW,Pan CW, et al. Prenatal diagnosis of trisomy 8 mosaicism. Taiwan J Obstet Gynecol, 2012; 51 (4): 666-8.	Not relevant study design: case report
Chen CP,Su YN,Chern SR,Tsai FJ,Hsu CY,Lee CC, et al. Prenatal diagnosis of a 4.9-Mb deletion of 10q11.21 -> q11.23 by array comparative genomic hybridization. Taiwan J Obstet Gynecol, 2010; 49 (1): 117-9.	Not relevant study design: case study
Chen CP,Su YN,Chern SR,Wu PS,Su JW,Town DD, et al. Prenatal diagnosis of an interstitial deletion of 10q (10q11.21 --> q21.1): array comparative genomic hybridization characterization and literature review. Taiwan J Obstet Gynecol, 2012; 51 (4): 672-6.	Not relevant study design: case report
Chen CP,Su YN,Hsu CY,Tsai FJ,Chien SC,Chern SR, et al. Abnormally flat facial profile on two- and three-dimensional ultrasound and array comparative genomic hybridization for the diagnosis of Pallister-Killian syndrome. Taiwan J Obstet Gynecol, 2010; 49 (1): 124-8.	Not relevant study design: case study
Chen CP,Su YN,Tsai FJ,Chern SR,Hsu CY,Huang MC, et al. Rapid genome-wide aneuploidy diagnosis using uncultured amniocytes and array comparative genomic hybridization in pregnancy with abnormal ultrasound findings detected in late second and third trimesters. Taiwan J Obstet Gynecol, 2010; 49 (1): 120-3.	Not relevant study design: case study
Chen CP,Wu PC,Lin CJ,Su YN,Chern SR,Tsai FJ, et al. Balanced reciprocal translocations detected at amniocentesis. Taiwan J Obstet Gynecol, 2010; 49 (4): 455-67.	Not relevant PICO: intervention
Chen M,Yang YS,Shih JC,Lin WH,Lee DJ,Lin YS, et al. Microdeletions/duplications involving TBX1 gene in fetuses with conotruncal heart defects which are negative for 22q11.2 deletion on fluorescence in-situ	Not relevant PICO intervention

hybridization. <i>Ultrasound Obstet Gynecol</i> 2014; 43 (4): 396-403.	
Chen S,Ge H,Wang X,Pan X,Yao X,Li X, et al. Haplotype-assisted accurate non-invasive fetal whole genome recovery through maternal plasma sequencing. <i>Genome Med</i> , 2013; 5 (2): 18.	Not relevant study design: case study
Chen X,Zhao KX, Zhao C. [The development and importance of molecular diagnosis in hereditary retinal diseases]. <i>Zhonghua Yan Ke Za Zhi</i> 2013; 49 (6): 484-7.	Language
Chitty LS,Mason S,Barrett AN,McKay F,Lench N,Daley R, et al. Non-invasive prenatal diagnosis of achondroplasia and thanatophoric dysplasia: next generation sequencing allows for a safer, more accurate and comprehensive approach. <i>Prenat Diagn</i> , 2015.	Targeted prenatal genetic testing for a specific aberration
Chiu RW,Chan KC,Gao Y,Lau VY,Zheng W,Leung TY, et al. Noninvasive prenatal diagnosis of fetal chromosomal aneuploidy by massively parallel genomic sequencing of DNA in maternal plasma. <i>Proc Natl Acad Sci U S A</i> , 2008; 105 (51): 20458-63.	Not relevant PICO: outcome
Choy KW,Kwok YK,Cheng YK,Wong KM,Wong HK,Leung KO, et al. Diagnostic accuracy of the BACs-on-Beads assay versus karyotyping for prenatal detection of chromosomal abnormalities: a retrospective consecutive case series. <i>Bjog</i> 2014; 121 (10): 1245-52.	Not relevant PICO: intervention
Choy KW,Tsang PT,Leung TY,Wang CC,Lau TK,Author A, et al. The application of microarray based comparative genomic hybridization in prenatal diagnosis. <i>Fetal and Maternal Medicine Review</i> , 2008; 19 (2): 119-33.	Not relevant study design
Cohen K,Tzika A,Wood H,Berri S,Roberts P,Mason G, et al. Diagnosis of fetal submicroscopic chromosomal abnormalities in failed array CGH samples: copy number by sequencing as an alternative to	Not relevant PICO: outcome

<p>microarrays for invasive fetal testing. <i>Ultrasound Obstet Gynecol</i>, 2015; 45 (4): 394-401.</p>	
<p>Coppinger J, Alliman S, Lamb AN, Torchia BS, Bejjani BA, Shaffer LG. Whole-genome microarray analysis in prenatal specimens identifies clinically significant chromosome alterations without increase in results of unclear significance compared to targeted microarray. <i>Prenat Diagn</i>, 2009; 29 (12): 1156-66.</p>	<p>Not relevant PICO: intervention</p>
<p>Coromilas A, Wynn J, Haverfield E, Chung WK. Nonspecific phenotype of Noonan syndrome diagnosed by whole exome sequencing. <i>Clin Case Rep</i>, 2015; 3 (4): 237-9.</p>	<p>Not relevant study design: case report</p>
<p>Costain G, McDonald-McGinn DM, Bassett AS. Prenatal genetic testing with chromosomal microarray analysis identifies major risk variants for schizophrenia and other later-onset disorders. <i>Am J Psychiatry</i>, 2013; 170 (12): 1498.</p>	<p>Not relevant study design</p>
<p>D'Amours G, Kibar Z, Mathonnet G, Fetni R, Tihy F, Desilets V, et al. Whole-genome array CGH identifies pathogenic copy number variations in fetuses with major malformations and a normal karyotype. <i>Clin Genet</i>, 2012; 81 (2): 128-41.</p>	<p>Not relevant PICO: intervention</p>
<p>D'Angelo G, Di Rienzo T, Ojetti V. Microarray analysis in gastric cancer: a review. <i>World J Gastroenterol</i> 2014; 20 (34): 11972-6.</p>	<p>Not relevant PICO: population</p>
<p>Darilek S, Ward P, Pursley A, Plunkett K, Furman P, Magoulas P, et al. Pre- and postnatal genetic testing by array-comparative genomic hybridization: genetic counseling perspectives. <i>Genet Med</i>, 2008; 10 (1): 13-8.</p>	<p>Not relevant PICO: intervention</p>
<p>Davies N. Prenatal screening with microarray technology. <i>MLO: Medical Laboratory Observer</i>, 2015; 47 (5): 8-12.</p>	<p>Not relevant PICO: intervention</p>

<p>de Jong A, Dondorp WJ, Krumeich A, Boonekamp J, van Lith JM, de Wert GM. The scope of prenatal diagnosis for women at increased risk for aneuploidies: views and preferences of professionals and potential users. <i>J Community Genet</i>, 2013; 4 (1): 125-35.</p>	<p>Not relevant PICO: population</p>
<p>Deshpande M, Harper J, Holloway M, Palmer R, Wang R. Evaluation of array comparative genomic hybridization for genetic analysis of chorionic villus sampling from pregnancy loss in comparison to karyotyping and multiplex ligation-dependent probe amplification. <i>Genet Test Mol Biomarkers</i>, 2010; 14 (3): 421-4.</p>	<p>Not relevant PICO: population</p>
<p>Dickinson JE, Harcourt E, Murch A. The selective use of rapid aneuploidy screening in prenatal diagnosis. <i>Australian & New Zealand Journal of Obstetrics & Gynaecology</i>, 2009; 49 (1): 28-33.</p>	<p>Not relevant PICO: intervention</p>
<p>Dondorp WJ, Page-Christiaens GC, de Wert GM. Genomic futures of prenatal screening: ethical reflection. <i>Clin Genet</i>, 2015.</p>	<p>Not relevant study design</p>
<p>Donley G, Hull SC, Berkman BE. Prenatal whole genome sequencing: just because we can, should we? <i>Hastings Cent Rep</i> 2012; 42 (4): 28-40.</p>	<p>Not relevant study design</p>
<p>Donnelly JC, Platt LD, Rebarber A, Zachary J, Grobman WA, Wapner RJ. Association of copy number variants with specific ultrasonographically detected fetal anomalies. <i>Obstet Gynecol</i>, 2014; 124 (1): 83-90.</p>	<p>Not relevant PICO: intervention</p>
<p>Donnelly JC, Wapner RJ, Simpson JL, Author A, Department o, Obstetrics, et al. Can microarray analysis reveal additional abnormalities in prenatal diagnosis? <i>Expert Review of Obstetrics and Gynecology</i>, 2013; 8 (3): 193-95.</p>	<p>Not relevant study design</p>
<p>Dugo N, Padula F, Mobili L, Brizzi C, D'Emidio L, Cignini P, et al. Six consecutive false positive cases from cell-free fetal DNA testing in a single referring centre. <i>J Prenat Med</i>, 2014; 8 (1-2): 31-5.</p>	<p>Not relevant PICO: population</p>
<p>Dugoff L. Application of genomic technology in prenatal diagnosis. <i>N Engl J Med</i> 2012; 367 (23): 2249-51.</p>	<p>Not relevant study design : editorial</p>

<p>Duncan A, Langlois S. Use of array genomic hybridization technology in prenatal diagnosis in Canada. <i>J Obstet Gynaecol Can</i>, 2011; 33 (12): 1256-9.</p>	<p>Not relevant PICO: intervention</p>
<p>Dupont C, Grati FR, Choy KW, Jaillard S, Toutain J, Maurin ML, et al. Prenatal diagnosis of 24 cases of microduplication 22q11.2: an investigation of phenotype-genotype correlations. <i>Prenat Diagn</i> 2014.</p>	<p>Not relevant PICO: Intervention</p>
<p>Eng CM, Yang Y, Plon SE. Genetic diagnosis through whole-exome sequencing... <i>N Engl J Med</i>. 2014 Mar 13;370(11):1067-8; <i>N Engl J Med</i>. 2013 Oct 17;369(16):1502-11; <i>N Engl J Med</i>. 2014 Mar 13;370(11):1067. <i>New England Journal of Medicine</i>, 2014; 370 (11): 1068-68.</p>	<p>Not relevant study design: letter</p>
<p>Evangelidou P, Alexandrou A, Moutafi M, Ioannides M, Antoniou P, Koumbaris G, et al. Implementation of high resolution whole genome array CGH in the prenatal clinical setting: advantages, challenges, and review of the literature. <i>Biomed Res Int</i>, 2013; 2013346762.</p>	<p>Not relevant PICO: intervention</p>
<p>Evangelidou P, Sismani C, Ioannides M, Christodoulou C, Koumbaris G, Kallikas I, et al. Clinical application of whole-genome array CGH during prenatal diagnosis: Study of 25 selected pregnancies with abnormal ultrasound findings or apparently balanced structural aberrations. <i>Mol Cytogenet</i>, 2010; 324.</p>	<p>Not relevant PICO: intervention</p>
<p>Faas BH, Feenstra I, Eggink AJ, Kooper AJ, Pfundt R, van Vugt JM, et al. Non-targeted whole genome 250K SNP array analysis as replacement for karyotyping in fetuses with structural ultrasound anomalies: evaluation of a one-year experience. <i>Prenat Diagn</i>, 2012; 32 (4): 362-70.</p>	<p>Not relevant PICO: intervention</p>
<p>Faas BH, van der Burgt I, Kooper AJ, Pfundt R, Hehir-Kwa JY, Smits AP, et al. Identification of clinically significant, submicroscopic chromosome alterations and UPD in fetuses with ultrasound anomalies using genome-wide 250k SNP array analysis. <i>J Med Genet</i>, 2010; 47 (9): 586-94.</p>	<p>Not relevant PICO: population</p>

<p>Fan HC, Quake SR. Sensitivity of noninvasive prenatal detection of fetal aneuploidy from maternal plasma using shotgun sequencing is limited only by counting statistics. <i>PLoS One</i>, 2010; 5 (5): e10439.</p>	<p>Not relevant PICO: Outcome</p>
<p>Faucett A, Savage M. Chromosomal microarray testing. <i>JAAPA: Journal of the American Academy of Physician Assistants</i> (Haymarket Media, Inc.) 2012; 25 (1): 65-66.</p>	<p>Not relevant PICO: intervention</p>
<p>Filges I, Kang A, Hench J, Wenzel F, Bruder E, Miny P, et al. Fetal polydactyly: a study of 24 cases ascertained by prenatal sonography. <i>J Ultrasound Med</i>, 2011; 30 (7): 1021-9.</p>	<p>Not relevant study design : case series</p>
<p>Filges I, Kang A, Klug V, Wenzel F, Heinimann K, Tercanli S, et al. Array comparative genomic hybridization in prenatal diagnosis of first trimester pregnancies at high risk for chromosomal anomalies. <i>Mol Cytogenet</i>, 2012; 5 (1): 38.</p>	<p>Not relevant PICO: intervention</p>
<p>Fiorentino F. Re: Use of prenatal chromosomal microarray: prospective cohort study and systematic review and meta-analysis. S. C. Hillman, D. J. McMullan, G. Hall, F. S. Togneri, N. James, E. J. Maher, C. H. Meller, D. Williams, R. J. Wapner, E. R. Maher and M. D. Kilby. <i>Ultrasound obstet gynecol</i> 2013; 41: 610-620. <i>Ultrasound Obstet Gynecol</i>, 2013; 41 (6): 608.</p>	<p>Not relevant study design: comment</p>
<p>Fiorentino F, Biricik A, Bono S, Spizzichino L, Cotroneo E, Cottone G, et al. Development and validation of a next-generation sequencing-based protocol for 24-chromosome aneuploidy screening of embryos. <i>Fertil Steril</i>, 2014; 101 (5): 1375-82.</p>	<p>Not relevant PICO: population</p>
<p>Fiorentino F, Caiazzo F, Napolitano S, Spizzichino L, Bono S, Sessa M, et al. Introducing array comparative genomic hybridization into routine prenatal diagnosis practice: a prospective study on over 1000 consecutive clinical cases. <i>Prenat Diagn</i>, 2011; 31 (13): 1270-82.</p>	<p>Not relevant PICO: intervention</p>

<p>Fiorentino F, Napoletano S, Caiazza F, Sessa M, Bono S, Spizzichino L, et al. Chromosomal microarray analysis as a first-line test in pregnancies with a priori low risk for the detection of submicroscopic chromosomal abnormalities. <i>Eur J Hum Genet</i>, 2013; 21 (7): 725-30.</p>	<p>Not relevant PICO: intervention</p>
<p>Fisher A, Bonner C, Biankin AV, Juraskova I. Factors influencing intention to undergo whole genome screening in future healthcare: A single-blind parallel-group randomised trial. <i>Preventive Medicine</i>, 2012; 55 (5): 514-20.</p>	<p>Not relevant PICO: population</p>
<p>Foglieni B, Galbiati S, Ferrari M, Cremonesi L. A fast microelectronic array for screening and prenatal diagnosis of beta-thalassemia. <i>Methods Mol Biol</i>, 2008; 444:169-82.</p>	<p>Targeted prenatal genetic testing for a specific aberration</p>
<p>Galbiati S, Brisci A, Damin F, Gentilin B, Curcio C, Restagno G, et al. Fetal DNA in maternal plasma: a noninvasive tool for prenatal diagnosis of beta-thalassemia. <i>Expert Opin Biol Ther</i> 2012; 12 Suppl 1S181-7.</p>	<p>Targeted prenatal genetic testing for a specific aberration</p>
<p>Ganesamoorthy D, Bruno DL, McGillivray G, Norris F, White SM, Adroub S, et al. Meeting the challenge of interpreting high-resolution single nucleotide polymorphism array data in prenatal diagnosis: does increased diagnostic power outweigh the dilemma of rare variants? <i>Bjog</i>, 2013; 120 (5): 594-606.</p>	<p>Not relevant PICO: intervention</p>
<p>Garcia-Herrero S, Campos-Galindo I, Martinez-Conejero JA, Serra V, Olmo I, Lara C, et al. BACs-on-Beads technology: a reliable test for rapid detection of aneuploidies and microdeletions in prenatal diagnosis. <i>Biomed Res Int</i> 2014; 2014590298.</p>	<p>Not relevant PICO: intervention</p>
<p>Gekas J, Sergi C, Kamnasaran D. Molecular prenatal diagnosis of a sporadic alobar holoprosencephalic fetus: genotype-phenotype correlations. <i>J Prenat Med</i>, 2012; 6 (3): 36-9.</p>	<p>Not relevant study design: case study</p>
<p>Giorlandino C, Mesoraca A, Bizzoco D, Dello Russo C, Cima A, Di Giacomo G, et al. Introducing the next generation sequencing in genomic amnio and villous</p>	<p>Not relevant study design</p>

<p>sampling. The so called "Next Generation Prenatal Diagnosis" (NGPD). <i>J Prenat Med</i>, 2014; 8 (1-2): 1-10.</p>	
<p>Grande M,Jansen FA,Blumenfeld YJ,Fisher A,Odibo AO,Haak MC, et al. Genomic microarray in fetuses with increased nuchal translucency and normal karyotype - a systematic review and meta-analysis. <i>Ultrasound Obstet Gynecol</i>, 2015.</p>	<p>Not relevant PICO: intervention</p>
<p>Grati FR,Ferreira JC, Bajaj K. Noninvasive prenatal screening for fetal trisomies 21, 18, 13 and the common sex chromosome aneuploidies from maternal blood using massively parallel genomic sequencing of DNA. <i>Am J Obstet Gynecol</i>, 2014; 211 (6): 711-12.</p>	<p>Not relevant study design</p>
<p>Grati FR,Vialard F, Gross S. BACs-on-Beads (BoBs) assay for the genetic evaluation of prenatal samples and products of conception. <i>Methods Mol Biol</i> 2015; 1227259-78.</p>	<p>Not relevant PICO: intervention</p>
<p>Gruchy N,Decamp M,Richard N,Jeanne-Pasquier C,Benoist G,Mittre H, et al. Array CGH analysis in high-risk pregnancies: comparing DNA from cultured cells and cell-free fetal DNA. <i>Prenat Diagn</i>, 2012; 32 (4): 383-8.</p>	<p>Not relevant PICO: intervention</p>
<p>Gruchy N,Lebrun M,Herlicoviez M,Alliet J,Gourdier D,Kottler ML, et al. Supernumerary marker chromosomes management in prenatal diagnosis. <i>Am J Med Genet A</i>, 2008; 146a (21): 2770-6.</p>	<p>Not relevant PICO: intervention</p>
<p>Gu H,Li H,Zhang L,Luan H,Huang T,Wang L, et al. Diagnostic role of microRNA expression profile in the serum of pregnant women with fetuses with neural tube defects. <i>J Neurochem</i>, 2012; 122 (3): 641-9.</p>	<p>Not relevant PICO: intervention</p>
<p>Guerra C,Rendeiro P,Pereira E,Rosmaninho A,Nogueira R,Pereira S, et al. Microarray for skeletal dysplasias: thanatophoric dysplasia diagnosed in utero using microarray technology. <i>Ultrasound Obstet Gynecol</i>, 2013; 41 (1): 95-6.</p>	<p>Not relevant PICO: intervention</p>

<p>Hall GK,Mackie FL,Hamilton S,Evans A,McMullan DJ,Williams D, et al. Chromosomal microarray analysis allows prenatal detection of low level mosaic autosomal aneuploidy. Prenat Diagn, 2014; 34 (5): 505-7.</p>	<p>Not relevant PICO: intervention</p>
<p>Held KR,Zahn S,Author A,Mvz genteQ GmbH Lf,Humangenetik FHG,Correspondence A, et al. Microarray-based comparative genomic hybridization for prenatal diagnosis: Indications and clinical evaluation ORIGINAL (NON-ENGLISH) TITLE Pranataler Array: Indikationen, Bewertung. Medizinische Genetik, 2014; 26 (4): 398-404.</p>	<p>Not relevant PICO: intervention</p>
<p>Hill M,Twiss P,Verhoef TI,Drury S,McKay F,Mason S, et al. Non-invasive prenatal diagnosis for cystic fibrosis: detection of paternal mutations, exploration of patient preferences and cost analysis. Prenat Diagn, 2015.</p>	<p>Not relevant PICO: population</p>
<p>Hillman S,McMullan D,Maher E, Kilby M. Clinical utility of array comparative genomic hybridisation for prenatal diagnosis: a cohort study of 3171 pregnancies... BJOG. 2012 Apr;119(5):614-25. BJOG: An International Journal of Obstetrics & Gynaecology, 2012; 119 (10): 1281-82.</p>	<p>Not relevant study design : editorial</p>
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<p>Pooh RK. Sonogenetics in fetal neurology. <i>Semin Fetal Neonatal Med</i> 2012; 17 (6): 353-9.</p>	<p>Not relevant PICO: intervention</p>
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<p>Rajcan-Separovic E. Chromosome microarrays in human reproduction. <i>Hum Reprod Update</i>, 2012; 18 (5): 555-67.</p>	<p>Not relevant study design</p>
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Saldarriaga W, Garcia-Perdomo HA, Arango-Pineda J, Fonseca J. Karyotype versus genomic hybridization for the prenatal diagnosis of chromosomal abnormalities: a metaanalysis. <i>Am J Obstet Gynecol</i> , 2014.	Not relevant PICO: Intervention
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<p>Shaffer LG,Dabell MP,Fisher AJ,Coppinger J,Bandholz AM,Ellison JW, et al. Experience with microarray-based comparative genomic hybridization for prenatal diagnosis in over 5000 pregnancies. <i>Prenat Diagn</i>, 2012; 32 (10): 976-85.</p>	<p>Not relevant PICO: intervention</p>
<p>Shaffer LG,Dabell MP,Rosenfeld JA,Neill NJ,Ballif BC,Coppinger J, et al. Referral patterns for microarray testing in prenatal diagnosis. <i>Prenatal Diagnosis</i>, 2012; 32 (4): 344-50.</p>	<p>Not relevant PICO: intervention</p>
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Talkowski ME,Ordulu Z,Pillalamarri V,Benson CB,Blumenthal I,Connolly S, et al. Clinical diagnosis by whole-genome sequencing of a prenatal sample. <i>N Engl J Med</i> , 2012; 367 (23): 2226-32.	Not relevant study design: case study
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<p>Wapner RJ,Martin CL,Levy B,Ballif BC,Eng CM,Zachary JM, et al. Chromosomal microarray versus karyotyping for prenatal diagnosis. N Engl J Med, 2012; 367 (23): 2175-84.</p>	<p>Not relevant PICO: intervention</p>
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<p>Westerfield LE,Stover SR,Mathur VS,Nassef SA,Carter TG,Yang Y, et al. Reproductive genetic counseling challenges associated with diagnostic exome sequencing in a large academic private reproductive genetic counseling practice. <i>Prenat Diagn</i>, 2015.</p>	<p>Not relevant PICO: intervention</p>
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<p>Wilson RD,Wilson RD,Audibert F,Brock JA,Campagnolo C,Carroll J, et al. Prenatal screening, diagnosis, and pregnancy management of fetal neural tube defects. <i>J Obstet Gynaecol Can</i>, 2014; 36 (10): 927-39.</p>	<p>Not relevant PICO: intervention</p>
<p>Wit MC,Srebniak MI,Govaerts LC,Opstal D,Galjaard RJ, Go AT. Additional value of prenatal genomic array testing in fetuses with isolated structural ultrasound abnormalities and a normal karyotype: a systematic review of the literature (Provisional abstract).</p>	<p>Not relevant PICO: intervention</p>

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Xie W,Tan Y,Li X,Lin G,Jiang H,Chen F, et al. Rapid detection of aneuploidies on a benchtop sequencing platform. Marias beställning, 2013; 33 (3): 232-7.	Not relevant PICO: Population
Xu HB,Yang H,Liu G, Chen H. Systematic review of accuracy of prenatal diagnosis for abnormal chromosome diseases by microarray technology. Genet Mol Res, 2014; 13 (4): 9115-21.	Not relevant PICO: intervention.
Xu Z,Geng Q,Luo F,Xu F,Li P, Xie J. Multiplex ligation-dependent probe amplification and array comparative genomic hybridization analyses for prenatal diagnosis of cytogenomic abnormalities. Mol Cytogenet, 2014; 7 (1): 84.	Not relevant PICO: intervention
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<p>Yuan Y,Jiang F,Hua S,Du B,Hao Y,Ye L, et al. Feasibility study of semiconductor sequencing for noninvasive prenatal detection of fetal aneuploidy. Clin Chem, 2013; 59 (5): 846-9.</p>	<p>Not relevant PICO: outcome</p>
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<p>Zwijnenburg PJG,Lakeman P,Pfundt R,Klein Wassink-Ruiter JS,Kerstjens-Frederikse WS, Van Ravenswaaij-Arts CMA, et al. Detection of submicroscopic chromosomal abnormalities using microarray analysis: The value and pitfalls in prenatal and postnatal diagnosis ORIGINAL (NON-ENGLISH) TITLE Detectie van submicroscopische chromosomale afwijkingen door middel van array-diagnostiek: De meerwaarde en de valkuilen in de prenatale en postnatale diagnostiek. <i>Tijdschrift voor Kindergeneeskunde</i>, 2014; 82 (1): 3-18.</p>	<p>Language</p>
<p>Systematic review</p>	
<p>Gil MM,Quezada MS,Revello R,Akolekar R, Nicolaides KH. Analysis of cell-free DNA in maternal blood in screening for fetal aneuploidies: updated meta-analysis. <i>Ultrasound Obstet Gynecol</i>, 2015; 45 (3): 249–66.</p>	<p>Systematic review Differences in inclusion exclusion criteria: includes studies published from 2011. Includes studies with a high risk of bias in the meta-analysis. High risk of bias: Pooling of data was done in spite of heterogeneity issues. Pooling of data was not made using the bivariate model or the hierarchical summary receiver operating characteristic model.</p>

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Dar Pe, Curnow KJ, Gross SJ, Hall MP, Stosic M, Demko Z, et al. Clinical experience and follow-up with large scale single-nucleotide polymorphism-based noninvasive prenatal aneuploidy testing. <i>American Journal of Obstetrics and Gynecology</i> , 2014; 211 (5): 527.e1-27.e17.
Drury S, Williams H, Trump N, Boustred C, Lench N, Scott RH, et al. Exome sequencing for prenatal diagnosis of fetuses with sonographic abnormalities. <i>Prenat Diagn</i> , 2015.
Fan HC, Gu W, Wang J, Blumenfeld YJ, El-Sayed YY, Quake SR. Non-invasive prenatal measurement of the fetal genome. <i>Marias beställning</i> , 2012; 487 (7407): 320-4.
Futch T, Spinosa J, Bhatt S, de Feo E, Rava RP, Sehnert AJ. Initial clinical laboratory experience in noninvasive prenatal testing for fetal aneuploidy from maternal plasma DNA samples. <i>Prenat Diagn</i> , 2013; 33 (6): 569-74.
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Jensen TJ,Dzakula Z,Deciu C,van den Boom D, Ehrich M. Detection of microdeletion 22q11.2 in a fetus by next-generation sequencing of maternal plasma. <i>Clin Chem</i> , 2012; 58 (7): 1148-51.
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Lau TK,Jiang FM,Stevenson RJ,Lo TK,Chan LW,Chan MK, et al. Secondary findings from non-invasive prenatal testing for common fetal aneuploidies by whole genome sequencing as a clinical service. <i>Prenat Diagn</i> , 2013; 33 (6): 602-8.
Liao C,Yin AH,Peng CF,Fu F,Yang JX,Li R, et al. Noninvasive prenatal diagnosis of common aneuploidies by semiconductor sequencing. <i>Proc Natl Acad Sci U S A</i> , 2014; 111 (20): 7415-20.
Meck JM,Kramer Dugan E,Matyakhina L,Aviram A,Trunca C,Pineda-Alvarez D, et al. Noninvasive prenatal screening for aneuploidy: positive predictive values based on cytogenetic findings. <i>Am J Obstet Gynecol</i> , 2015; 213 (2): 214.e1-5.
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