

Appendix G Excluded studies

Chapter 4 Determining gestational age and chorionicity

Gestational age

Review question

What are the optimal ultrasound measurements to determine gestational age in multiple pregnancy?

a) Are the measurements and charts (crown–rump length, biparietal diameter and head circumference) used for dating singletons equally effective for twins or are there systematic errors introduced from using these charts?

No.	Bibliographic information	Reason for exclusion
1	Getting a 'handle' on multiple pregnancies. Contemporary OB/GYN. Vol 54 p23 (2009)	Brief editorial review of a paper
2	Ahlborg L, Ek S, Fridstrom M, Kublickas M, Leijon M, Nisell H. Is fetal growth impaired after in vitro fertilization? Acta Obstetrica et Gynecologica Scandinavica. Vol 85 p195-199 (2006)	Study did not involve twin pregnancy
3	Amso NN, Griffiths A. The role and applications of ultrasound in ambulatory gynaecology. Best Practice and Research in Clinical Obstetrics and Gynaecology. Vol 19 p693-711 (2005)	Narrative review, unrelated to twin pregnancy
4	Choong S, Rombauts L, Ugoni A, Meagher S. Ultrasound prediction of risk of spontaneous miscarriage in live embryos from assisted conceptions. Ultrasound in Obstetrics and Gynecology. Vol 22 p571-577 (2003)	Study unrelated to twin pregnancy
5	Dokras A, Baredziak L, Blaine J, Syrop C, VanVoorhis BJ, Sparks A. Obstetric outcomes after in vitro fertilization in obese and morbidly obese women. Obstetrics & Gynecology. Vol 108 p61-69 (2006)	Study unrelated to twin pregnancy
6	Grange G, Pannier E, Goffinet F, Cabrol D, Zorn JR. Dating biometry during the first trimester: Accuracy of an every-day practice. European Journal of Obstetrics Gynecology and Reproductive Biology. Vol 88 p61-64 (2000)	Study did not compare measurement charts between singletons and twins
7	Kalish RB, Gupta M, Perni SC, Berman S, Chasen ST. Clinical significance of first trimester crown-rump length disparity in dichorionic twin gestations.[see comment]. American Journal of Obstetrics and Gynecology. Vol 191 p1437-1440 (2004)	Study included only twins
8	Mongelli M, Yuxin NG, Biswas A, Chew S. Accuracy of ultrasound dating formulae in the late second-trimester in pregnancies conceived with in-vitro fertilization. Acta Radiologica. Vol 44 p452-455 (2003)	Study included only singletons

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9	Mongelli M, Chew S, Yuxin NG, Biswas A. Third-trimester ultrasound dating algorithms derived from pregnancies conceived with artificial reproductive techniques. <i>Ultrasound in Obstetrics and Gynecology</i> . Vol 26 p129-131 (2005)	Study included only singletons
10	Saltvedt S, Almstrom H, Kublickas M, Reilly M, Valentin L, Grunewald C. Ultrasound dating at 12-14 or 15-20 weeks of gestation? A prospective cross-validation of established dating formulae in a population of in-vitro fertilized pregnancies randomized to early or late dating scan. <i>Ultrasound in Obstetrics and Gynecology</i> . Vol 24 p42-50 (2004)	Study included only singletons
11	Sladkevicius P, Saltvedt S, Almstrom H, Kublickas M, Grunewald C, Valentin L. Ultrasound dating at 12-14 weeks of gestation. A prospective cross-validation of established dating formulae in in-vitro fertilized pregnancies. <i>Ultrasound in Obstetrics and Gynecology</i> . Vol 26 p504-511 (2005)	Study included only singletons
12	Suzuki S, Murata T. The influence of assisted reproductive technology on growth discordance in dichorionic twin pregnancies. <i>Fetal Diagnosis and Therapy</i> . Vol 22 p372-376 (2007)	Study did not make comparisons between singletons and twins
13	Tunon K, Eik-Nes SH, Grottum P, von D, V, Kahn JA. Gestational age in pregnancies conceived after in vitro fertilization: a comparison between age assessed from oocyte retrieval, crown-rump length and biparietal diameter. <i>Ultrasound in Obstetrics and Gynecology</i> . Vol 15 p41-46 (2000)	Study did not compare measurement charts between singletons and twins
14	Mordel N, Laufer N, Zajicek G, Shalev Z, Lewin A, Schenker JG et al. Sonographic growth curves of triplet conceptions. <i>American Journal of Perinatology</i> . Vol 10 p239-242 (1993)	Study did not clarify whether pregnancies resulted from IVF (also, measurements were carried out in late pregnancy, i.e. 25-36 weeks)
15	Porreco RP, Kaske TI, Henry GP, Shapiro H. Crown-rump length dating of pregnancy: error estimates based on measurement of embryos conceived by in vitro fertilization. <i>Journal of Maternal-Fetal Medicine</i> 1992; 1(6):289-292.	Study included only singletons
16	Wisser J and Dirschedl P. Embryonic heart rate in dated human embryos. <i>Early Human Development</i> 1994; 37:(2)107-15	Study did not report fetal biometrics (but measured embryonic heart rate)
17	Wisser J, Dirschedl P, Krone S. Estimation of gestational age by transvaginal sonographic measurement of greatest embryonic length in dated human embryos. <i>Ultrasound Obstet Gynecol</i> 1994; 4(6):457-462.	Study did not report separate results for twin and/or triplet pregnancies (but a combined result for multiple pregnancies that may have included quadruplets)

Review question

What are the optimal ultrasound measurements to determine gestational age in multiple pregnancy?

b) Which fetus should be used for estimating gestational age in multiple pregnancies?

No.	Bibliographic Information	Reason for Excluding Study
18	Leveno KJ, Santos-Ramos R, Duenhoelter JH. Sonar cephalometry in twins: A table of biparietal diameters for normal twin fetuses and a comparison with singletons. American Journal of Obstetrics and Gynecology. Vol 135 p727-730 (1979)	Study did not make comparisons between larger and smaller twins
19	Pridmore BR. The role of ultrasound in the management of twin pregnancies. Australasian Radiology. Vol 29 p154-157 (1985)	Study did not make comparisons between larger and smaller twins
20	Gilstrap III, Hankins GDV, Collins TL et al. Serial biparietal diameter and femur length measurements in twin gestations. American Journal of Perinatology 1986; 3:(3)183-6	Study did not make comparisons between larger and smaller twins
21	Ceylon Medical Journal 2010 55 (3) p80-84 Early pregnancy growth and pregnancy outcome in twin pregnancies Dias, T.	Examined association between crown-rump length discrepancy and adverse pregnancy outcomes, including discordant fetal growth. No data on estimation of gestational age were presented
22	Journal of Ultrasound in Medicine 2010 29 (10) p1439-1443 Discordance of first-trimester crown-rump length is a predictor of adverse outcomes in structurally normal euploid dichorionic twins Fareeduddin, R.	Examined association between crown-rump length discordance and obstetric complications in structurally and chromosomally normal dichorionic twins. Not relevant to review question

Chorionicity

Review question

What is the optimal method to determine chorionicity in multiple pregnancies?

No.	Bibliographic information	Reason for exclusion
23	Alhamdan D, Bora S and Condous G. Diagnosing twins in early pregnancy. <i>Best Practice and Research Clinical Obstetrics and Gynaecology</i> . Vol 23 p453-461 (2009)	Narrative review with no new data
24	Arabin B and van Eyck J. The role of ultrasound in multiple pregnancy. <i>Twin Research</i> . Vol 4 (2) p141-145 (2001)	Narrative review with no new data
25	Benardis P, Katsetos C, Michailidis G et al. Determination of chorionicity by three-dimensional ultrasonography in a quadruplet pregnancy. <i>Acta Obstet Gynecol Scand</i> . Vol 83 p404-413 (2004)	Case report
26	Bora SA, Papageoghiou AT, Bottomley C. Reliability of transvaginal ultrasonography at 7-9 weeks' gestation in the determination of chorionicity and amnionicity in twin pregnancies. <i>Ultrasound Obstet Gynecol</i> . Vol 32 p618-621 (2008)	Study did not use a recognised gold standard – it compared ultrasound scan findings at 7-9 weeks with those at 11-14 weeks
27	Brambati B, Tului L, Guercilena S et al. Outcome of first trimester chorionic villus sampling for genetic investigation in multiple pregnancy. <i>Ultrasound Obstet Gynecol</i> . Vol 17 p209-216 (2001)	Study did not clearly specify the reference standard used
28	Chapman, K. Failure to diagnose monoamniotic twin pregnancy by ultrasound but with fortunate outcome. <i>Journal of Obstetrics and Gynaecology</i> . Vol 19 (3) p310-311 (1999)	Case report
29	Cleary-Goldman J and D'Alton ME. Growth abnormalities and multiple gestations. <i>Seminars in Perinatology</i> . Vol 32 (3) p206-212 (2008)	Narrative review with no new data
30	Cordero L, Franco A and Joy SD. Monochorionic monoamniotic twins: neonatal outcome. <i>Journal of Perinatology</i> . Vol 26, p170-175 (2006)	Study reported risks associated with monochorionic, monoamniotic pregnancies – not a predictive study
31	Derom R, Bryan E, Derom C et al. Twins, Chorionicity and Zygosity. <i>Twin Research</i> . Vol 4 (3) p134-136 (2001)	Narrative review with no new data
32	Egan JFX and Borgida AF. Multiple gestations: the importance of ultrasound. <i>Obstet Gynaecol Clin N Am</i> . Vol 31 p141-158 (2004)	Narrative review with no new data
33	Filly RA, Goldstein RB and Callen PW. Monochorionic Twinning: Sonographic Assessment. Vol 154 p459-469 (1989)	Narrative review with no new data
34	Finberg HJ. The 'twin peak' sign: reliable evidence of dichorionic twinning. <i>J Ultrasound Med</i> . Vol 11 p571-577 (1992)	Included only scans with a lambda sign in the final analysis, and so the numbers of false positives, false negatives and true negatives were not reported
35	Forget-Dubois N, Perusse D, Turecki G et al. Diagnosing zygosity in infant twins: physical similarity, genotyping and chorionicity. <i>Twin Research</i> . Vol 6 p479-485 (2003)	Not clear how chorionicity was determined or what reference standard was used. No data on how many pregnancies were monochorionic or dichorionic
36	Fox TB. Multiple pregnancies: Determining chorionicity and amnionicity. <i>JDMS</i> . Vol 22 p59-65 (2006)	Narrative review with no new data
37	Gaziano EP, De Lia JE, Kuhlmann RS. Diamniotic Monochorionic Twin Gestations: An Overview. <i>The Journal</i>	Narrative review with no new data

No.	Bibliographic information	Reason for exclusion
	of Maternal-Fetal Medicine. Vol 9 p89-96 (2000)	
38	Gibson J and Cameron A. Complications of monochorionic twins. Paediatrics and Child Health. Vol 18 (12) p568-573 (2008)	Narrative review with no new data
39	Guilherme R, Drunat S, Delezoide AL et al. Zygosity and Chorionicity in the Prognosis of Triplet Pregnancies: Contribution of Microsatellites. Twin Research and Human Genetics. Vol 11 (6) p648-655 (2008)	Study investigated how chorionicity is related to adverse fetal outcomes and did not assess how to determine chorionicity
40	Hill L, Chenevey P, Hecker J et al. Sonographic determination of first trimester twin chorionicity and amnionicity. J Clin Ultrasound. Vol 24 p305-308 (1996)	Study reported the reliability of using number of gestational sacs in first trimester sonography to determine chorionicity. This is not a method of determining chorionicity that was prioritised for consideration
41	Leduc L, Takser L and Rinfret D. Persistence of adverse obstetric and neonatal outcomes in monochorionic twins after exclusion of disorders unique to monochorionic placentation. American Journal of Obstetrics and Gynecology. Vol 193, p1670-1675 (2005)	Study investigated how chorionicity is related to adverse fetal outcomes – not a predictive study
42	Lopriore E, Sueters M, Middeldorp JM et al. Twin pregnancies with two separate placental masses can still be monochorionic and have vascular anastomoses. American Journal of Obstetrics and Gynaecology. Vol 194 p804-808 (2006)	Study reported the correlation between the presence of monochorionic placentae and indicators of monochorionicity on retrospectively reviewed ultrasound scans. It did not look at determining chorionicity in the general multiple pregnancy population, just a subset of monochorionic pregnancies
43	Machin GA. The monochorionic twin placenta in vivo is not a black box. Ultrasound Obstet Gynecol. Vol 17 p4-6 (2001)	Narrative review with no new data
44	Machin GA. Why is it important to diagnose chorionicity and how do we do it? Best Practice and Research in Clinical Obstetrics and Gynaecology. Vol 18 (4) p515-530 (2004)	Narrative review with no new data
45	Menon DK. A retrospective study of the accuracy of sonographic chorionicity determination in twin pregnancies. Vol 8 (3) p259-261 (2005)	Study did not report the gestational age at which the scans were conducted
46	Monteagudo A and Timor-Tritsch IE. Second- and third-trimester ultrasound evaluation of chorionicity and amnionicity in twin pregnancy: a simple algorithm. The Journal of Reproductive Medicine. Vol 45 (6) p476-480 (2000)	Description of an algorithm to determine chorionicity with no data from its use or regarding its accuracy
47	Monteagudo A, Timor-Tritsch IE and Sharma S. Early and simple determination of chorionic and amniotic type in multifetal gestations in the first fourteen weeks by high-frequency transvaginal ultrasonography. Am J Obstet Gynecol. Vol 170 (3) p824-829 (1993)	Study did not specify which methods of determining chorionicity were used
48	Moon MH, Park SU, Song MJ et al. Diamniotic twin pregnancies with a single placental mass; prediction of chorionicity at 11 to 14 weeks of gestation. Prenat Diagn. Vol 28 p1011-1015 (2008)	Study included only pregnancies with a single placental mass (monochorionic) and so did not allow the numbers of false

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No.	Bibliographic information	Reason for exclusion
		negatives and true negatives to be reported
49	Papageorgiou AT, Bakoulas V, Sebire NJ et al. Intrauterine growth in multiple pregnancies in relation to fetal number, chorionicity and gestational age. <i>Ultrasound Obstet Gynecol.</i> Vol 32, p890-893 (2008)	Study investigated the link between chorionicity and birth weight
50	Perni SC. Ultrasound evaluation of multifetal gestation. <i>The Ultrasound Review of Obstetrics and Gynaecology.</i> Vol 5 (2) p144-153 (2005)	Narrative review with no new data
51	Ralston SJ and Craig SD. Ultrasound-guided procedures for prenatal diagnosis and therapy. <i>Obstet Gynecol Clin N Am.</i> Vol 31 p101-123 (2004)	Narrative review with no new data
52	Redline RW. Nonidentical twins with a single placenta – disproving dogma in perinatal pathology. <i>N Engl J Med.</i> Vol 349 (2) p111-114 (2003)	Narrative review with no new data
53	Rochon M, Eddleman K and Stone J. Invasive procedures in multifetal pregnancies. <i>Clin Perinatol.</i> Vol 32 p355-371 (2005)	Narrative review with no new data
54	Rode M and Jackson M. Monographic considerations with multiple gestation. <i>Seminars in Roentgenology.</i> Vol 34 (1) p29-34 (1999)	Narrative review with no new data
55	Salomon LJ, Cavicchioni O, Bernard JP et al. Growth discrepancy in twins in the first trimester of pregnancy. <i>Ultrasound Obstet Gynecol.</i> Vol 26 p512-516 (2005)	Not a predictive study and did not address chorionicity
56	Scardo JA, Ellings JM and Newman RB. Prospective determination of chorionicity, amnionicity and zygosity in twin gestations. <i>Am J Obstet Gynecol.</i> Vol 173 (5) p1376-1380 (1995)	Study did not report the gestational age at which the scans were conducted
57	Schrimmer DB and Moore TR. Sonographic evaluation of amniotic fluid volume. <i>Clinical Obstetrics and Gynaecology.</i> Vol 45 (4) p1026-1038 (2002)	Narrative review on amniotic fluid volume with no information regarding chorionicity
58	Senat MV, Quarello E, Levailant JM, Buonumano A, Boulvain M and Frydman R. Determining chorionicity in twin gestations: three-dimensional (3D) multiplanar sonographic measurement of intra-amniotic membrane thickness. <i>Ultrasound Obstet Gynecol.</i> Vol 28 p665-669 (2006)	Study retrospectively examined frequency distributions of membrane thickness to establish a threshold/cut-off. It was not a predictive study and the reproducibility of the results in a clinical setting is unclear
59	Sepulveda W, Sebire NJ, Hughes K. The lambda sign at 10-14 weeks of gestation as a predictor of chorionicity in twin pregnancies. <i>Ultrasound Obstet. Gynecol.</i> Vol 7 p421-423 (1996)	Study used only neonatal sex as the reference test, which was not a recognised gold standard listed in the protocol for this question. Of 279 pregnancies included, the results of only 163 reference tests were reported. It is unclear what the results for the remaining 116 pregnancies were
60	Sepulveda W, Sebire N, Odibo A et al. Prenatal determination of chorionicity in triplet pregnancy by ultrasonographic examination of the epsilon zone. <i>Obstetrics and Gynaecology.</i> Vol 88 (5) p855-858 (1996)	Study compared the diagnosis of chorionicity between ultrasound scans at different gestational ages. It did not use a gold standard reference test listed in the protocol

No.	Bibliographic information	Reason for exclusion
61	Sfakianaki AK and Han CS. Ultrasound evaluation of twin pregnancy. Ultrasound in the evaluation of twin pregnancy. <i>Minerva Ginecologica</i> . Vol 61 (2) p127-139 (2009)	Narrative review with no new data
62	Sherer DM. Adverse perinatal outcome of twin pregnancies according to chorionicity: review of the literature. <i>American Journal of Perinatology</i> . Vol 18 (1) p23-37 (2001)	Narrative review with no new data
63	Shetty A and Smith APM. The sonographic diagnosis of chorionicity. <i>Prenatal diagnosis</i> . Vol 25 p735-739 (2005)	Narrative review with no new data
64	Stagiannis KD, Sepulveda W, Southwell D et al. Ultrasonographic measurement of the dividing membrane in twin pregnancy during the second and third trimesters: a reproducibility study. <i>Am J Obstet Gynecol</i> . Vol 173 (5) p1546-1550 (1995)	No data on comparing different methods of determining chorionicity
65	Tannirandom Y and Phaosavasdi S. Accuracy of ultrasonographic criteria for the prenatal diagnosis of placental amnionicity and chorionicity in twin gestations. <i>J Med Assoc Thai</i> . Vol 76 (4) p190-195	Study did not report the gestational age at which the scans were conducted
66	Taylor MJO, Talbert DG, Fisk NM. Mapping the monochorionic equator – the new frontier. <i>Ultrasound Obstet Gynecol</i> . Vol 14 p372-374 (1999)	Narrative review with no information on determining chorionicity
67	Trop I. The Twin Peak Sign. <i>Radiology</i> . Vol 220, p68-69 (2001)	Narrative review with no new data
68	Vayssiere CF, Haim N, Camus EP et al. Determination of chorionicity in twin gestations by high-frequency abdominal ultrasonography: counting the layers of the dividing membrane. <i>Am J Obstet Gynecol</i> . Vol 175 (6), p1529-1533 (1996)	Study used several different reference tests, some of which were not the gold standard specified in the protocol for this question. It was not possible to determine the test results for pregnancies which were assessed against the gold standard specified in the protocol
69	Wegrzyn P, Fabio C, Peralta A et al. Placental volume in twin and triplet pregnancies measured by three-dimensional ultrasound at 11+0 to 13+6 weeks of gestation. <i>Ultrasound Obstet Gynecol</i> . Vol 27 p647-651 (2006)	Report on placental volume in relation to chorionicity – not a predictive study
70	Weisz B, Pandya P, Dave R et al. Scanning for chorionicity: comparison between sonographers and perinatologists. <i>Prenatal Diagnosis</i> . Vol 25 p835-838 (2005)	Comparison of different healthcare professionals using the same methods, rather than between the different methods of determining chorionicity
71	Benson CB, Doubilet PM and Laks MP. Outcome of twin gestations following sonographic demonstration of two heart beats in the first trimester. <i>Ultrasound Obstet. Gynecol</i> vol 3 (1993) p343-345	Not a predictive study
72	<i>Acta Obstetrica et Gynecologica Scandinavica</i> 2009 88 (4) p386-390 Ultrasound assessment of the prognosis in triplet pregnancies Guilherme, R.	Narrative review

Chapter 5 General care

Information and emotional support

Review question

Is there benefit in giving women with multiple pregnancy additional information and emotional support during the antenatal period?

No.	Bibliographic information	Reason for exclusion
834	Acta Geneticae Medicae et Gemellologiae 1990 39 (2) p259-269 What information should the multiple birth family receive before, during and after the birth? Hay, D. A.	Narrative review. No original data
835	AWHONN Lifelines 2001 5 (2) p34-42 Double-take. Defining the need for specialized prenatal care for women expecting twins: a Canadian perspective. [62 refs] Watson-Blasioli, J.	Narrative review. No original data
836	Best Practice and Research in Clinical Obstetrics and Gynaecology 2004 18 (4) p657-668 Economic and social implications of multiple birth Campbell, D.	Opinion, commentary paper
837	BMC Pregnancy and Childbirth 2008 8 (1) p22 The design, implementation and acceptability of an integrated intervention to address multiple behavioral and psychosocial risk factors among pregnant African American women Katz, K. S.	Does not report results specifically for twin and/or triplet pregnancies
838	Clinical Obstetrics and Gynecology 2004 47 (1) p146-162 Improving Multiple Pregnancy Outcomes with Nutritional Interventions Luke, B.	Narrative review. No original data
839	Cochrane Database of Systematic Reviews 2009 (1) Support during pregnancy for women at increased risk of low birthweight babies Hodnett, Ellen D.	Does not report results specifically for twin and/or triplet pregnancies. All included studies were considered separately
697	Cochrane Database of Systematic Reviews 2009 (1) Specialised antenatal clinics for women with a multiple pregnancy for improving maternal and infant outcomes Dodd, Jodie M.	A systematic review with no included studies. There were no RCTs identified assessing the benefits and harms of additional information and support in the antenatal period for women with multiple pregnancy
840	Contemporary Reviews in Obstetrics and Gynaecology 1995 7 (4) p215-219 Antenatal and postnatal problems of multiple births Denton, J.	Opinion, commentary paper
841	Evidence Based Midwifery 2006 4 (1) p10-16 Caring for twin infants: sleeping arrangements and their implications Ball, H. L.	No antenatal intervention
842	Infertility and Reproductive Medicine Clinics of North America	Narrative review of articles. Does not address the review question and its

No.	Bibliographic information	Reason for exclusion
	1998 9 (3) p475-493 Preterm birth prevention programs and other interventions to decrease preterm birth in multiple gestations Gregory, K. D.	intervention
843	International Journal of Childbirth Education 2006 21 (1) p28-30 Supporting and educating the family experiencing bedrest during pregnancy Johns, L.	Opinion paper
844	Journal of Adolescent Health Care 1987 8 (3) p273-279 Effects of social supports on attitudes and health behaviors of pregnant adolescents Giblin, P. T.	Does not report results specifically for twin and/or triplet pregnancies
845	Journal of Paediatrics and Child Health 1994 30 (6) p483-489 Factors adversely associated with breast feeding in New Zealand Ford, R. P.	Study investigating breastfeeding. No antenatal intervention
846	MCN, American Journal of Maternal Child Nursing 1980 5 (5) p320-325 Supplemental information for the family with a multiple pregnancy Jimenez, S. L.	Opinion, commentary paper
847	MIDIRS Midwifery Digest 2005 15 (4) p439-449 Independent midwifery compared with other caseload practice Milan, M.	Does not report results specifically for twin and/or triplet pregnancies
848	Seminars in Neonatology 2002 7 (3) p241-246 Educating families, before, during and after a multiple birth Bryan, E.	Opinion, commentary paper
849	Ultrasound in Obstetrics and Gynecology 1997 9 (2) p86-90 Perception of information, expectations and experiences among women and their partners attending a second-trimester routine ultrasound scan Eurenius, K.	Does not report results specifically for twin and/or triplet pregnancies
850	Womens Health 1995 1 (1) p51-75 Psychosocial predictors of postpartum depressed mood in socioeconomically disadvantaged women Neter, E.	Does not report results specifically for twin and/or triplet pregnancies
235	Twin Research 2001 4 (3) p159-164 The ten commandments in multiple pregnancies Di, RenzoG	Narrative review - no original data
472	Acta Geneticae Medicae et Gemellologiae 1985 34 (3-4) p189-192 Is routine hospitalization in twin pregnancy necessary? A follow-up study Hartikainen-Sorri, A. L.	Study investigates bed rest and hospitalisation. Does not address the review question and the relevant intervention
476	International Journal of Gynaecology and Obstetrics	Study investigates bed rest and hospitalisation. Does not address the

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No.	Bibliographic information	Reason for exclusion
	2002 77 (3) p223-229 Hospitalization vs. outpatient care in the management of triplet gestations Skrablin, S.	review question and the relevant intervention
471	Journal of Perinatal Medicine 1984 12 (1) p31-34 Is routine hospitalization needed in antenatal care of twin pregnancy? Hartikainen-Sorri, A. L.	Study investigates hospitalisation. Does not address the review question and the relevant intervention
851	American Journal of Managed Care 2001 7 (8) p793-803 A randomized trial of nurse specialist home care for women with high-risk pregnancies: Outcomes and costs Brooten, D.	Do not report results specifically for twin and/or triplet pregnancies
852	Obstetrics and Gynecology 2001 97 (6) p982-987 In-home nursing care for women with high-risk pregnancies: outcomes and cost Harrison, M. J.	Do not report results specifically for twin and/or triplet pregnancies
853	Acta Geneticae Medicae et Gemellologiae. 1974 22 suppl pp.59-61 , "Results of a specialized preventive care in women with twin pregnancy" , , Horsky, J.	Study investigating bed rest and antenatal hospitalisation as an intervention, not looking at additional information and emotional support
854	American Journal of Managed Care 2001 7 (4) p377-386 Healthy Pregnancy Program in a national managed care organization: Evaluation of satisfaction and health behavior outcomes Drinkard, C. R.	Does not report results specifically for twin and/or triplet pregnancies
855	Indian Journal of Pediatrics 1991 58 (6) p795-804 Indian experience of home based mothers card: ICMR task force study Abraham, S.	Does not report results specifically for twin and/or triplet pregnancies
474	British Journal of Obstetrics and Gynaecology 1981 88 (3) p222-230 The merits of special antenatal care for twin pregnancies O'Connor, M. C.	Study investigates bed rest and hospitalisation. Does not address the review question and the relevant intervention
468	The Journal of Reproductive Medicine 1996 41(8) p595-601 Frank Henry Boehm; Cheryl, A. Glass; George W Reed	Only three women with multiple pregnancy included. Does not report results specifically for twin and/or triplet pregnancies
856	JAMA 2000 Vol 284 (3) p335 to 341 Trends in twin birth outcomes and prenatal care utilisation in the United States 1981-1997 Kogan MD, Alexander GR, Kotelchuck M, MacDorman MF, Buekens P, Martin JA and Papiernik E	Does not address the question of what additional information and support to offer to women with twin or triplet pregnancy
857	Human Reproduction 2010 25 (6) p1490-1496 Mothers of IVF and spontaneously conceived twins: A comparison of prenatal maternal expectations, coping resources and maternal stress	A questionnaire-based study of antenatal maternal expectation, coping resource and maternal stress. No particular intervention in terms of providing information or emotional support was evaluated

No.	Bibliographic information	Reason for exclusion
	Baor, L.	
858	<p>Infant Mental Health Journal 2010 31 (3) p277-290 The interface of mental and emotional health and pregnancy in urban indigenous women: Research in progress Hayes, B. A.</p>	<p>Study population was indigenous Australian women, not necessarily with multiple pregnancy. Data for women with multiple pregnancy not reported separately</p>
859	<p>International Journal of Nursing Studies 2010 47 (10) p1208-1216 Evaluation of an interpersonal-psychotherapy-oriented childbirth education programme for Chinese first-time childbearing women: a randomised controlled trial Gao, L. L.</p>	<p>Study population was first-time mothers in China, not necessarily with multiple pregnancy. Data for women with multiple pregnancy not reported separately</p>

Nutritional supplements

Review question

What additional (or different) dietary supplements are effective in improving maternal health and wellbeing (for example, reducing the risk of anaemia) in women with multiple pregnancy?

No.	Bibliographic information	Reason for exclusion
657	Shrimpton R, Huffman SL, Zehner ER et al. Multiple micronutrient supplementation during pregnancy in developing-country settings: policy and program implications of the results of a meta-analysis. <i>Food and Nutrition Bulletin</i> 2009; 30:(4)S556-S573.	Study did not report data on twin or triplet pregnancies
658	Fall CH, Fisher DJ, Osmond C et al. Multiple micronutrient supplementation during pregnancy in low-income countries: a meta-analysis of effects on birth size and length of gestation. <i>Food and Nutrition Bulletin</i> 2009; 30:(4)S533-S546.	Study excluded women with multiple pregnancies
659	Huy ND, Le HT, Shrimpton R et al. An effectiveness trial of multiple micronutrient supplementation during pregnancy in Vietnam: impact on birthweight and on stunting in children at around 2 years of age. <i>Food and Nutrition Bulletin</i> 2009; 30:(4)S506-S516.	No data for twin or triplet pregnancies reported in the study
660	Sunawang, Utomo B, Hidayat A et al. Preventing low birthweight through maternal multiple micronutrient supplementation: a cluster-randomized, controlled trial in Indramayu, West Java. <i>Food and Nutrition Bulletin</i> 2009; 30:(4 Suppl)S488-S495.	Study excluded twins from analysis
661	Ramakrishnan U, Neufeld LM, Gonzalez-Cossio T et al. Multiple micronutrient supplements during pregnancy do not reduce anemia or improve iron status compared to iron-only supplements in Semirural Mexico. <i>Journal of Nutrition</i> 2004; 134:(4)898-903.	Study included only pregnancies that resulted in singleton live births
662	Ramakrishnan U, Gonzalez-Cossio T, Neufeld LM et al. Multiple micronutrient supplementation during pregnancy does not lead to greater infant birth size than does iron-only supplementation: a randomized controlled trial in a semirural community in Mexico. <i>American Journal of Clinical Nutrition</i> 2003; 77:(3)720-5.	Study did not report data on twin or triplet pregnancies
663	Bhutta ZA RA. A comparative evaluation of multiple micronutrient and iron-folic acid supplementation during pregnancy in Pakistan: impact on pregnancy outcomes. <i>Food and Nutrition Bulletin</i> 2009; 30:(4)S496-S505.	Study did not report data on twin or triplet pregnancies
664	Pena-Rosas JP and Viteri FE. Effects and safety of preventive oral iron or iron+folic acid supplementation for women during pregnancy. <i>Cochrane Database of Systematic Reviews</i> 2010;(2).	Study did not report data on twin or triplet pregnancies
665	Mahomed K, Bhutta ZA, and Middleton P. Zinc supplementation for improving pregnancy and infant outcome. <i>Cochrane Database of Systematic Reviews</i> 2009;(1).	Study did not report data on twin or triplet pregnancies
666	Haider BA and Bhutta ZA. Multiple-micronutrient supplementation for women during pregnancy. <i>Cochrane Database of Systematic Reviews</i> 2009;(1).	Study did not report data on twin or triplet pregnancies
667	Luke B. Nutrition and multiple gestation. <i>Seminars in Perinatology</i> 2005; 29:(5)349-54.	Study is a review article with no primary data
668	Mardones F, Urrutia MT, Villarroel L et al. Effects of a dairy product fortified with multiple micronutrients and omega-3 fatty acids on birth weight and gestation	Study excluded women with multiple pregnancies

No.	Bibliographic information	Reason for exclusion
	duration in pregnant Chilean women. Public Health Nutrition 2008; 11:(1)30-40.	
669	Makrides M, Duley L, and Olsen SF. Marine oil, and other prostaglandin precursor, supplementation for pregnancy uncomplicated by pre-eclampsia or intrauterine growth restriction. Cochrane Database of Systematic Reviews 2009;(1).	The study is already included through inclusion of Olsen et al (2000) ⁶⁷⁰ which is the only RCT in this Cochrane review with data on twin pregnancies
671	Olsen SF, Osterdal ML, Salvig JD et al. Duration of pregnancy in relation to fish oil supplementation and habitual fish intake: a randomised clinical trial with fish oil. European Journal of Clinical Nutrition 2007; 61:(8)976-85.	Study did not report on any of the outcomes listed in the protocol for this review question
672	Goodnight W. Optimal nutrition for improved twin pregnancy outcome. Obstetrics and Gynecology 2009 114 (5) p1121-1134.	Study is a review article with no primary data
673	Cochrane Database of Systematic Reviews 2010 (10) Effects and safety of periconceptional folate supplementation for preventing birth defects DeRegil, Maria Luz	Cochrane review on periconceptional folate supplementation for preventing birth defects. Data for multiple pregnancies not reported separately. Multiple pregnancy considered as a secondary outcome of periconceptional folate supplementation (reported in a few studies)

Diet and lifestyle advice

Review question

Is nutritional advice specific to multiple pregnancies effective in improving maternal and fetal health and wellbeing?

No.	Bibliographic information	Reason for exclusion
674	Luke B, Keith L, and Keith D. Maternal nutrition in twin gestations: weight gain, cravings and aversions, and sources of nutrition advice. <i>Acta Geneticae Medicae et Gemellologiae</i> 1997; 46:(3)157-66.	Not clear how women were recruited to this study and some women may have been recruited more than once. Few women in the comparison (no nutritional advice) group. Study does not report on smoking or ethnicity, and baseline characteristics of the women in the different groups were not assessed for significant differences
675	Luke B. Improving multiple pregnancy outcomes with nutritional interventions. [92 refs]. <i>Clinical Obstetrics and Gynecology</i> 2004; 47:(1)146-62.	Review article, not primary research
676	Leonard LG. Twin pregnancy: maternal-fetal nutrition. <i>JOGN Nursing</i> 1982; 11:(3)139-45.	Review article, not primary research
673	Cochrane Database of Systematic Reviews 2010 (10) Effects and safety of periconceptional folate supplementation for preventing birth defects DeRegil, Maria Luz	Cochrane review on periconceptional folate supplementation for preventing birth defects. Not relevant to the review question

Specialist care

Review question

Do specialist multiple pregnancy clinics improve outcomes in twin and triplet pregnancies?

No.	Bibliographic information	Reason for exclusion
467	Annals of African Medicine 2007 6 (1) p12-16 Triplet gestation: clinical outcome of 14 cases Adesiyun, A. G.	Compares no antenatal care to routine antenatal care
468	Journal of Reproductive Medicine 1996 41 (8) p595-601 Prevention of preterm birth. Role of daily telephone contact Boehm, F. H.	Does not report on specialist antenatal clinics
469	Archives of Gynecology and Obstetrics 2003 268 (1) p15-18 Maternal and neonatal outcome of high order gestation Bu-Hejja, A. T.	Does not report on specialist antenatal clinics
470	American Journal of Perinatology 2006 23 (4) p205-211 Inpatient versus outpatient management of monoamniotic twins and outcomes DeFalco, L.M.	Population is highly specialised (all pregnancies were monoamniotic). Inpatient versus outpatient management rather than specialist clinics
471	Journal of Perinatal Medicine 1984 12 (1) p31-34 Is routine hospitalization needed in antenatal care of twin pregnancy? Hartikainen-Sorri, A. L.	Does not report on specialist antenatal clinics
472	Acta Geneticae Medicae et Gemellologiae 1985 34 (3-4) p189-192 Is routine hospitalization in twin pregnancy necessary? A follow-up study Hartikainen-Sorri, A. L.	Does not report on specialist antenatal clinics
473	Journal of Perinatal Medicine 1993 21 (4) p303-308 Twins--results after changing the management in pregnancy and labor Hengst, P.	Does not report on specialist antenatal clinics
474	British Journal of Obstetrics and Gynaecology 1981 88 (3) p222-230 The merits of special antenatal care for twin pregnancies O'Connor, M. C.	Bed rest and hospitalisation - does not report on specialist antenatal clinics
475	Clinical Obstetrics & Gynecology 2004 47 (1) p263-271 Antenatal care for women with multiple pregnancies: the Liverpool approach Owen, D. J.	Description of specialist antenatal clinics for multiples with no evidence relating to their effectiveness
476	International Journal of Gynaecology and Obstetrics 77 (3) p223-229 Hospitalization vs. outpatient care in the management of triplet gestations Skrablin, S.; Kuvacic, I.; Jukic, P.; Kalafatic, D.; Peter, B.	Bed rest and hospitalisation - does not report on specialist antenatal clinics
477	Seminars In Fetal and Neonatal Medicine 2010 15 (6) p357-361 Multiples clinic: a model for antenatal care Knox, E.	British Library unable to supply

Chapter 6 Fetal complications

Screening for chromosomal abnormalities

Review question

When and how should screening be used to identify chromosomal abnormalities in multiple pregnancy?

No.	Bibliographic information	Reason for exclusion
259	American Journal of Medical Genetics 1984 18 (3) p419-422 One hundred twin pregnancies in a prenatal diagnosis program Taylor, M. B.	Not a prediction study
260	Obstetrics and Gynecology 1993 82 (1) p49-56 Prenatal diagnosis in twin gestations: a comparison between second-trimester amniocentesis and first-trimester chorionic villus sampling Wapner, R. J.	Not a prediction study as it compares chorionic villus sampling with amniocentesis
261	Obstetrics and Gynecology 2000 96 (5 Pt 1) p714-720 Outcome of twin gestations after first trimester chorionic villus sampling De, Catte L.	No index test
262	Prenatal Diagnosis 2003 23 (7) p588-592 Combining nuchal translucency and serum markers in prenatal screening for Down syndrome in twin pregnancies Wald, N. J.	Not a prediction study
263	American Journal of Obstetrics and Gynecology 2008 199 (3) p283-283 First-trimester screening with nasal bone in twins Cleary-Goldman, J.	Does not report true positive, true negative, false positive and false negative data
264	American Journal of Obstetrics & Gynecology 2007 197 (4) p374-3 First-trimester risk assessment for trisomies 21 and 18 in twin pregnancy Chasen, S. T.	Not a prediction study. The study uses data retrospectively to determine a threshold for screening
265	American Journal of Obstetrics & Gynecology 2006 194 (1) p127-130 Clinical use of first-trimester aneuploidy screening in a United States population can replicate data from clinical trials Perni, S. C.	No twin/triplet data
266	American Journal of Obstetrics and Gynecology 2004 #191 (1) p45-67 Nuchal translucency and other first-trimester sonographic markers of chromosomal abnormalities Nicolaidis, K. H.	Narrative review with no new data
267	American Journal of Perinatology 1999 16 (3) p103-120 First-trimester nuchal translucency screening for fetal aneuploidy Sherer, D. M.	Narrative review with no new data
268	American Journal of Obstetrics and Gynecology 1997 177 (5) p987-991 Alpha-fetoprotein, free beta-human chorionic gonadotropin, and dimeric inhibin A produce the best results in a three-analyte, multiple-marker screening	Not a prediction study. The study uses data retrospectively to determine a threshold for screening

No.	Bibliographic information	Reason for exclusion
	test for fetal Down syndrome Wenstrom, K. D.	
269	American Journal of Medical Genetics 12-12-1997 73 (2) p109-112 Differential increases in AFP, hCG, and uE3 in twin pregnancies: impact on attempts to quantify Down syndrome screening calculations O'Brien, J. E.	Not a prediction study
270	American Journal of Obstetrics and Gynecology 1996 174 (3) p1072-1074 Maternal serum analyte levels after first-trimester multifetal pregnancy reduction Shulman, L. P.	Not a prediction study
271	American Journal of Obstetrics and Gynecology 7-1-1978 131 (5) p584-585 Prenatal diagnosis of Down syndrome in one of dizygotic twins Filkins, K.	Case report
89	Best Practice and Research in Clinical Obstetrics and Gynaecology 2000 14 (4) p663-675 Prenatal diagnosis in multiple pregnancy Taylor, M. J.	Narrative review
272	Birth Defects: Original Article Series 1987 23 (6) p95-99 Prenatal diagnosis in twin pregnancies Hager, J. M.	Ultrasound used as an index test for only four fetuses. The other index tests (family history and maternal age) were not of interest to the guideline reviewers. The index test and results were not specified in 16 fetuses
273	British Journal of Obstetrics and Gynaecology 1998 105 (1) p63-67 The role of ultrasonographic markers for trisomy 21 in women with positive serum biochemistry Verdin, S. M.	Inappropriate index test: second trimester normal variant markers
274	British Journal of Obstetrics and Gynaecology 1997 104 (6) p741-743 Maternal serum free beta-hCG at 10 to 14 weeks of gestation in trisomic twin pregnancies Noble, P. L.	Inappropriate index test: first trimester serum free B-hCG only
275	British Journal of Obstetrics and Gynaecology 1996 103 (9) pviii Screening for fetal trisomy in twin pregnancy Grant, J. M.	Commentary with no original data
276	British Journal of Obstetrics and Gynaecology 1996 103 (9) p887-890 Fetal karyotyping in twin pregnancies: selection of technique by measurement of fetal nuchal translucency Sebire, N. J.	Duplicates population in another study ²⁷⁷
278	British Journal of Obstetrics and Gynaecology 1991 98 (9) p905-908 Maternal serum unconjugated oestriol and human chorionic gonadotrophin levels in twin pregnancies: implications for screening for Down's syndrome Wald, N.	No test accuracy data - all normal pregnancies

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
279	Clinical Obstetrics and Gynecology 2008 51 (1) p48-61 The use of prenatal ultrasound for the detection of fetal aneuploidy Holmgren, C.	Narrative review
280	Clinical Obstetrics and Gynecology 2004 47 (1) p163-180 Diagnosis and Management of Obstetrical Complications Unique to Multiple Gestations Graham, G.	Narrative review
281	Clinics in Perinatology 2003 30 (1) p95-102 Ethical dimensions of nuchal translucency screening Chasen, S. T.	Narrative review on ethics
282	Clinics in Perinatology 1987 14 (2) p293-312 Ethical aspects of prenatal diagnosis: views of U.S. medical geneticists Fletcher, J. C.	Narrative review on ethics
283	Current Opinion in Obstetrics and Gynecology 2007 #19 (2) p176-182 Screening for aneuploidy in first and second trimesters: Is there an optimal paradigm? Breathnach, F. M.	Narrative review
284	Current Opinion in Obstetrics and Gynecology 1993 5 (5) p657-663 Multiple pregnancy Lantz, M. E.	Narrative review with no new data
285	Eastern Mediterranean Health Journal 1997 3 (3) p571-572 Coexistent chromosomal and autosomal dominant conditions in a triple pregnancy Gadra, A. H.	Case report
286	European Journal of Obstetrics, Gynecology, and Reproductive Biology 2000 92 (1) p97-101 Biochemical screening for Down syndrome Cuckle, H.	Narrative review with no new data on twins or triplets
287	Fertility and Sterility 2008 90 (5)-2011e24 Twin trisomies-Edward and Patau syndromes Massiah, N.	Narrative summary and case report
288	Fetal Diagnosis and Therapy 2004 19 (2) p174-177 A Comparison between Maternal Serum Free beta-Human Chorionic Gonadotrophin and Pregnancy-Associated Plasma Protein a Levels in First-Trimester Twin and Singleton Pregnancies Mashiach, R.	Not a prediction study
289	Fetal Diagnosis and Therapy 1997 12 (3) p153-155 Prenatal diagnosis of trisomy 21 in monozygotic twins with increased nuchal translucency and abnormal serum biochemistry Verdin, S. M.	Case report
290	Genetic Counseling 2007 18 (1) p1-7 Fetal nuchal translucency thickness	Narrative review with no new data

No.	Bibliographic information	Reason for exclusion
	Witters, I.	
291	Genetic Counseling 2003 14 (4) p395-400 A low rate of trisomy 21 in twin-pregnancies: a cytogenetics retrospective study of 278 cases Jamar, M.	Not a prediction study
292	Gynakologe 2008 41 (10) p761-762 Multiple pregnancy - A special challenge for care. [German, English] Bender, H. G.	German language paper
293	Human Reproduction 2008 23 (9) Editor's choice	Commentary no original data
294	Human Reproduction 1993 8 (11)-2000 Genetic disorders: Methods of avoiding the birth of an affected child Brambati, B.	Narrative review with no new data
295	Human Reproduction Update 2006 12 (5) p513-518 An update on antenatal screening for Down's syndrome and specific implications for assisted reproduction pregnancies Weisz, B.	Narrative review with no original data
296	Human Reproduction Update 1999 5 (5) p530-534 Antenatal screening for Down's syndrome in assisted reproductive pregnancies Maymon, R.	Narrative review with no original data
297	Immuno-Analyse et Biologie Specialisee 2005 #20 (1) p21-Analyse First trimester serum concentrations of placental proteins in singleton and multiple IVF pregnancies: Implications for Down syndrome screening Bersinger, N. A.	Not a prediction study
298	International Journal of Clinical Practice 2008 62 (5) p735-743 Evaluation of Down's syndrome screening population data sets by simulation: analyser-specific parameters may be superior to meta-analysis-derived parameters Reynolds, T. M.	No subgroup analysis for twins and/or triplets
299	Journal D'Echographie et de Medecine Par Ultrasons 1998 #19 (2-3) p100-103 Routine ultrasound at 10-14 weeks of pregnancy Snijders, R.	Narrative review with no new data
300	Journal of Assisted Reproduction and Genetics 1999 16 (1) p8-12 Midtrimester maternal serum screening after multifetal pregnancy reduction in pregnancies conceived by in vitro fertilization Rotmensch, S.	No index text. Includes quadruplets and higher-order pregnancies reduced to twins
301	Journal of Maternal-Fetal and Neonatal Medicine 2009 22 (12) p1194-Fetal Stepwise sequential screening for trisomy 21 in assisted reproduction pregnancies Pastorino, D.	No test accuracy data calculable as no cases of trisomy 21 in twin population

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
302	Journal of Maternal-Fetal and Neonatal Medicine 2006 #19 (10) p663-Fetal Quality of nuchal translucency measurements in multifetal pregnancies Zohav, E.	Inappropriate reference standard - quality of measurements rather than correlation with chromosome abnormalities
303	Journal of Maternal-Fetal and Neonatal Medicine 2003 14 (1) p70-Fetal EAPM Study Group on multiple pregnancy Blickstein, I.	Commentary with no original data
304	Journal of Pediatrics 1978 93 (2) p293-294 Prenatal diagnosis in twin pregnancy Suzuki, Y.	Includes fewer than five fetuses
305	Journal of Perinatal Medicine 2005 33 (3)-198 Pregnancy outcome of euploid fetuses with increased nuchal translucency: How bad is the news? Maymon, R.	Inappropriate reference standard - other adverse pregnancy outcomes but not chromosomal anomalies
306	Journal of Perinatology 2006 26 (7) p403-408 Seeing baby: women's experience of prenatal ultrasound examination and unexpected fetal diagnosis Van der Zalm, J. E.	Not a predictive study
307	Journal of Reproductive Medicine 2009 54 (5) p312-314 First-trimester biochemistry and outcomes in twin pregnancy Chasen, S. T.	Inappropriate reference standard - other adverse pregnancy outcomes but not chromosomal anomaly
308	New England Journal of Medicine 1998 338 (17) p1228-1230 Increased nuchal translucency and fetal chromosomal defects [3] (multiple letters) Malone, F. D.	Letter
309	Obstetrical and Gynecological Survey 2003 58 (9) p609-614 Screening for aneuploidy in twins and higher-order multiples: is first-trimester nuchal translucency the solution? Odibo, A. O.	Narrative review with no original data
310	Obstetrics and Gynecology 2009 113 (4) p860-865 Ductus venosus Doppler at 11 to 13 weeks of gestation in the prediction of outcome in twin pregnancies Maiz, N.	Not a prediction study
311	Obstetrics and Gynecology 2007 109 (1) p217-227 ACOG Practice Bulletin No. 77: screening for fetal chromosomal abnormalities ACOG Committee on Practice Bulletins.	Narrative review with no original data
312	Obstetrics and Gynecology 2007 110 (2 I) p399-404 First-trimester ultrasound assessment of the nasal bone to screen for aneuploidy Rosen, T.	Narrative review with no original data
313	Obstetrics and Gynecology 2006 107 (2 Pt 2) p538-541	Case report

No.	Bibliographic information	Reason for exclusion
	Monozygotic twins discordant for monosomy 21 detected by first-trimester nuchal translucency screening Cheng, P. J.	
314	Obstetrics and Gynecology Clinics of North America 2004 31 (1) p1-20 First-trimester screening for aneuploidy Brigatti, K. W.	Narrative review with no original data
315	Obstetrics and Gynecology Clinics of North America 1997 24 (1) p33-47 Maternal serum screening for fetal genetic disorders Ross, H. L.	Narrative review with no original data
316	Obstetrics and Gynecology 1990 75 (5) p875-880 Prenatal screening: professional standards and the limits of parental choice Botkin, J. R.	Narrative review on ethics
317	Pediatrics 2004 114 (1) p256-259 Risks of birth defects and other adverse outcomes associated with assisted reproductive technology Green, N. S.	Narrative review with no original data
318	Prenatal Diagnosis 2010 30 (3) p235-240 First trimester aneuploidy screening in the presence of a vanishing twin: implications for maternal serum markers Spencer, K.	Not a prediction study
319	Prenatal Diagnosis 2009 29 (8) p814-815 Second-trimester maternal serum screening for Down syndrome in twin-to-twin transfusion syndrome Sermondade, N.	Inappropriate index test: alpha fetoprotein and free B- hCG only
320	Prenatal Diagnosis 2009 29 (1) p74-78 Early first-trimester free beta -hCG and PAPP-A serum distributions in monochorionic and dichorionic twins Linskens, I. H.	Comparison of values between chorionicity - no diagnostic accuracy data for chromosomal anomalies
321	Prenatal Diagnosis 2009 29 (8) p804-805 Fetal karyotype in fetofetal transfusion syndrome: A 7-year experience Vialard, F.	No index test, karyotype in a series of fetofetal transfusion cases
322	Prenatal Diagnosis 2008 28 (8) p735-738 Second-trimester maternal serum free-beta-human chorionic gonadotropin and alpha-fetoprotein levels in normal twin and singleton pregnancies: a report of local Chinese population Xie, Z.	No test accuracy data, reference standards in Chinese population
323	Prenatal Diagnosis 2008 28 (1) p49-52 Screening for trisomy 21 in twin pregnancies in the first trimester: an update of the impact of chorionicity on maternal serum markers Spencer, K.	No test accuracy data, marker levels only
324	Prenatal Diagnosis 2008 28 (12) p1105-1109	Inappropriate index test - second trimester alpha fetoprotein and free

No.	Bibliographic information	Reason for exclusion
	Second-trimester Down syndrome maternal serum marker screening: a prospective study of 11 040 twin pregnancies Garchet-Beaudron, A.	B-hCG
325	Prenatal Diagnosis 2007 27 (10) p922-925 First-trimester ultrasound examination and the outcome of monochorionic twin pregnancies El, KatebA	Inappropriate reference standard - feto-fetal transfusion rather than chromosomal anomalies
326	Prenatal Diagnosis 2006 26 (3) p218-220 Nuchal translucency measurements are highly correlated in both mono- and dichorionic twin pairs Wojdemann, K. R.	Inappropriate reference standard, correlation between nuchal translucency in twin pairs rather than with chromosomal anomalies
327	Prenatal Diagnosis 2005 25 (9) p827-834 Psychological aspects of prenatal diagnosis and its implications in multiple pregnancies Bryan, E.	Narrative review no original data
328	Prenatal Diagnosis 2003 23 (1) p16-20 Triploidy in a twin pregnancy: small placenta volume as an early sonographical marker Gassner, R.	Case report
329	Prenatal Diagnosis 2002 22 (8) p718-721 First trimester screening with free beta-hCG, PAPP-A and nuchal translucency in pregnancies conceived with assisted reproduction Orlandi, F.	Inappropriate reference standard - comparison of values between IVF and spontaneous pregnancies rather than to diagnose chromosomal anomalies
330	Prenatal Diagnosis 2001 21 (9) p715-717 Screening for trisomy 21 in twin pregnancies in the first trimester: does chorionicity impact on maternal serum free beta-hCG or PAPP-A levels? Spencer, K.	Comparison of values between chorionicity rather than to diagnose chromosomal anomaly
331	Prenatal Diagnosis 2000 20 (8) p683-684 First trimester prenatal diagnosis of trisomy 21 in discordant twins using fetal nuchal translucency thickness and maternal serum free beta-hCG and PAPP-A Spencer, K.	Case report
332	Prenatal Diagnosis 2000 20 (10) p785-789 First trimester biochemical screening for Down syndrome: free beta hCG versus intact hCG Hallahan, T.	No multiple pregnancy data
333	Prenatal Diagnosis 2000 20 (6) p495-499 Screening for triploidy by fetal nuchal translucency and maternal serum free beta-hCG and PAPP-A at 10-14 weeks of gestation Spencer, K.	No multiple pregnancy data
334	Prenatal Diagnosis 2000 20 (2) p91-95 Screening for trisomy 21 in twin pregnancies in the first trimester using free beta-hCG and PAPP-A,	No test accuracy data, statistical modelling of detection rates rather than original data

No.	Bibliographic information	Reason for exclusion
	combined with fetal nuchal translucency thickness Spencer, K.	
335	Prenatal Diagnosis 1997 17 (5) p488-490 Re: Second-trimester maternal serum alpha-fetoprotein, human chorionic gonadotropin, and unconjugated oestriol after early transvaginal multifetal pregnancy reduction [2] Shulman, L. P.	Data regarding change in values following multiple pregnancy reduction rather than compared with diagnosis of chromosomal anomalies
336	Prenatal Diagnosis 1996 16 (10) p927-929 Maternal serum inhibin-A levels in twin pregnancies: implications for screening for Down's syndrome Watt, H. C.	No test accuracy data, comparison of inhibin A levels between twins and singletons
337	Prenatal Diagnosis 1996 16 (1) p29-34 Multiple marker screening for Down syndrome in twin pregnancies Neveux, L. M.	Test accuracy data not calculable as no cases of chromosomal abnormality
338	Prenatal Diagnosis 1995 15 (4) p386-387 Down's syndrome screening in twin pregnancies Reynolds, T. M.	Letter
339	Prenatal Diagnosis 1994 14 (7) p537-542 Down's syndrome screening in multiple pregnancies using alpha-fetoprotein and free beta hCG Spencer, K.	Not a prediction study. Data used retrospectively to determine a threshold for screening
340	Prenatal Diagnosis 1991 11 (10) p767-774 First-trimester genetic diagnosis in multiple pregnancy: principles and potential pitfalls Brambati, B.	Narrative review no original data
341	Seminars in Perinatology 2008 32 (4) p253-257 Fetal Doppler: Umbilical Artery, Middle Cerebral Artery, and Venous System Mari, G.	Review with no subgroup analysis for twins and/or triplets
342	Seminars in Perinatology 2005 29 (6) p405-411 Additional benefits of first trimester screening D'Alton, M. E.	Narrative review with no original data
343	Seminars in Perinatology 2005 29 (4) p190-194 First-trimester screening for chromosomal abnormalities Nicolaidis, K. H.	Narrative review with no original data
344	Seminars in Perinatology 2005 29 (6) p395-400 First trimester screening for Down syndrome in multiple pregnancy. [59 refs] Cleary-Goldman, J.	Narrative review with no original data
345	South African Medical Journal 2008 98 (4) p295-299 Nuchal translucency as a method of first-trimester screening for aneuploidy Naidoo, P.	No subgroup analysis for twins and/or triplets, and it is unclear how many twins and/or triplets were included

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
346	Southeast Asian Journal of Tropical Medicine and Public Health 2003 34 Suppl 3 p244-248 Prenatal genetic screening for Down syndrome and open neural tube defects using maternal serum markers in Thai pregnant women Wasant, P.	No subgroup analysis for twins and/or triplets, and it is unclear how many twins and/or triplets were included
347	Taiwanese Journal of Obstetrics and Gynecology 2008 47 (2) p157-162 First- and second-trimester Down syndrome screening: current strategies and clinical guidelines Shaw, S. W.	Narrative review with no original data
348	Twin Research 2003 6 (4) p251-256 Screening for aneuploidy in twin pregnancies: maternal age- and race-specific risk assessment between 9-14 weeks Odibo, A. O.	Not a prediction study
349	Ultrasound in Obstetrics and Gynecology 2009 33 (4) p387-393 Medians and correction factors for biochemical and ultrasound markers in Chinese women undergoing first-trimester screening for trisomy 21 Sahota, D. S.	No test accuracy data - normative values for Chinese population
350	Ultrasound in Obstetrics and Gynecology 2008 32 (5) p612-617 First-trimester screening in pregnancies conceived by assisted reproductive technology: significance of gestational dating by oocyte retrieval or sonographic measurement of crown-rump length Gjerris, A. C.	Singletons only
351	Ultrasound in Obstetrics and Gynecology 2001 18 (6) p649-651 Fetal nuchal translucency screening in 12495 pregnancies in Sardinia Zoppi, M. A.	No data on multiple pregnancy
100	Acta Geneticae Medicae et Gemellologiae 1996 45 (3) p387-394 Prenatal ultrasound diagnosis of cystic hygroma occurring in twin pregnancies Malinowski, W.	Preselected population of pregnancies with cystic hygroma identified by ultrasound, therefore there are no true negative or false negative data. It was not explicitly stated whether this study included only twins
102	Acta Obstetrica et Gynecologica Scandinavica 2001 80 (4) p287-299 Twin pregnancy: The role of ultrasound in management Sperling, L.	Narrative review with no original data
352	Acta Obstetrica et Gynecologica Scandinavica - Supplement 1977 61 p1-92 Maternal serum alpha-feto-protein: its value in antenatal diagnosis of genetic disease and in obstetrical-gynaecological care Habib, Z. A.	Supplement with several papers included. None of the papers were predictive studies
353	American Journal of Obstetrics and Gynecology 1992 167 (4 Pt 1) p1021-1024 Multiple-marker screening in pregnancies with	Preselected population of pregnancies with Turner syndrome, therefore there are no false positive

No.	Bibliographic information	Reason for exclusion
	hydropic and nonhydropic Turner syndrome Saller, D. N., Jr.	or true negative data. The number of twins was not specified
78	Baillieres Clinical Obstetrics and Gynaecology 1998 12 (1) p19-36 Screening for fetal abnormalities in multiple pregnancies Sebire, N. J.	Narrative review with no original data
79	Best Practice and Research in Clinical Obstetrics and Gynaecology 2004 18 (4) p531-542 What prenatal diagnosis should be offered in multiple pregnancy? Bhide, A.	Narrative review with no original data
81	Best Practice and Research in Clinical Obstetrics and Gynaecology 2000 14 (4) p581-594 The 11-14 week scan Nicolaidis, K. H.	Narrative review with no original data
354	Birth Defects: Original Article Series 1982 18 (3 Pt A) p121-124 Prenatal diagnosis and multiple gestation Meier, P. R.	Narrative review with two case reports (< 5 fetuses)
355	British Medical Journal 3-22-1975 1 (5959) p651-652 Maternal serum alpha-fetoprotein levels in multiple pregnancy Wald, N.	No test accuracy data, normal multiple pregnancies only
122	Clinical Obstetrics and Gynecology 2008 51 (1) p37-47 The use of nuchal translucency in contemporary obstetric practice Said, S.	Narrative review with no original data
356	Clinical Obstetrics and Gynecology 1996 39 (4) p793-800 Maternal serum screening for fetal Down syndrome: the detection of other pathologies Saller, D. N., Jr.	Narrative review with no original data
357	Clinical Obstetrics and Gynecology 1976 19 (4) p893-907 Prenatal genetic diagnosis and ultrasonography Patel, J.	Narrative review with no original data
126	Clinics in Perinatology 2001 28 (2) p333-352 First-trimester ultrasound Snijders, R.	Narrative review no original data
135	Current Obstetrics and Gynaecology 1998 8 (3) p182-184 Multiple pregnancy Whittle, M	Not a prediction study
138	Current Opinion in Obstetrics and Gynecology 2005 17 (2) p185-195 Ultrasound and fetal diagnosis Filkins, K.	Narrative review with no original data
140	Current Opinion in Obstetrics and Gynecology 2002 14 (2) p169-175 Prenatal diagnosis for multiple pregnancies Dommergues, M.	Narrative review with no original data

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
141	Current Opinion in Obstetrics and Gynecology 2000 12 (2) p87-92 The challenge of prenatal diagnosis in twin pregnancies Jenkins, T. M.	Narrative review with no original data
142	Current Opinion in Obstetrics and Gynecology 1997 9 (2) p96-101 Fetal testing in twins Denbow, M. L.	Narrative review with no original data
358	Current Opinion in Obstetrics and Gynecology 1995 7 (2) p95-102 First trimester fetal nuchal translucency Pandya, P. P.	Narrative review with no original data
359	Current Opinion in Obstetrics and Gynecology 1993 5 (1) p50-55 Prenatal diagnosis and fetal therapy Nicolini, U.	Narrative review with no original data
360	Current Opinion in Obstetrics and Gynecology 1992 4 (2) p280-285 Prenatal diagnosis in multiple pregnancies Neilson, J. P.	Does not predict chromosomal abnormalities
361	Current Opinion in Obstetrics and Gynecology 1992 4 (2) p321-337 Prenatal diagnosis	Not a prediction study
362	Fetal Diagnosis and Therapy 1996 11 (1) p16-19 Multiple marker screening in multifetal gestations: failure to predict adverse pregnancy outcomes Drugan, A.	Does not predict chromosomal abnormalities
163	Health Technology Assessment 2000 4 (16) pi-183 Ultrasound screening in pregnancy: A systematic review of the clinical effectiveness, cost-effectiveness and women's views Bricker, L.	Structured abstract and the full paper has been considered separately
96	Health Technology Assessment (Winchester, England) 2001 4 (16) pi-vi Ultrasound screening in pregnancy: a systematic review of the clinical effectiveness, cost-effectiveness and women's views Bricker, L.	No subgroup analysis for multiple pregnancies
167	Human Reproduction 1999 14 (8) p2102-2105 The feasibility of nuchal translucency measurement in higher order multiple gestations achieved by assisted reproduction Maymon, R.	Nuchal translucency measured but no structural or chromosomal abnormalities in this series
170	International Journal of Gynaecology and Obstetrics 2002 79 (3) p225-228 Prenatal course and pregnancy outcome of fetuses with a transient nuchal translucency Fukada, Y.	Not a prediction study
183	Journal of Obstetrics and Gynaecology Canada: JOGC 2005 27 (11) p1048-1062 Amended Canadian guideline for prenatal diagnosis (2005) change to 2005-techniques for prenatal diagnosis	Not a prediction study

No.	Bibliographic information	Reason for exclusion
	Wilson, R. D.	
363	Journal of Ultrasound in Medicine 2008 27 (3) p363-369 Nuchal translucency thickness in monozygotic multiple pregnancies: value in predicting pregnancy outcome Casasbuenas, A.	Does not predict chromosomal abnormalities
364	Journal of Ultrasound in Medicine 2004 23 (4) p501-504 Feasibility of Nuchal Translucency in Triplet Pregnancies Maslovitz, S.	True positive and false positive data not reported
196	Ob-Gyn Malpractice Prevention 2002 9 (6) p41-48 Multiple gestations mean multiple risks Garza, M.	Not a prediction study
199	Obstetrical and Gynecological Survey 1998 53 (11) p715-726 First trimester ultrasonography of multiple gestations: A review Sherer, D. M.	Narrative review with no original data
365	Obstetrics and Gynecology 2003 102 (5) p1066-1079 First-trimester sonographic screening for down syndrome Malone, F. D.	Narrative review with no original data
366	Prenatal Diagnosis 2010 30 (3) p247-250 Difference in nuchal translucency between monozygotic and dizygotic spontaneously conceived twins Cheng, P. J.	Not a prediction study
367	Prenatal Diagnosis 2005 25 (9) p740-745 Prenatal screening for Down syndrome and neural tube defects in twin pregnancies Wald, N. J.	Narrative review with no original data
368	Prenatal Diagnosis 2003 23 (2) p157-162 First-trimester maternal serum PAPP-A, SP1 and M-CSF levels in normal and trisomic twin pregnancies Bersinger, N. A.	Median values for affected and unaffected pregnancies reported but no test accuracy data
218	Prenatal Diagnosis 2002 22 (4) p308-315 Increased fetal nuchal translucency at 11-14 weeks Nicolaidis, K. H.	Narrative review with no original data
369	Prenatal Diagnosis 2001 21 (9) p726-728 Nuchal translucency thickness and outcome in chromosome translocation diagnosed in the first trimester Sepulveda, W.	Only one twin pregnancy
370	Prenatal Diagnosis 2000 #20 (3) p221-223 Maternal midtrimester serum AFP and free beta-hCG levels in in vitro fertilization twin pregnancies Raty, R.	Comparison between spontaneous and IVF pregnancy values with no test accuracy data

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
222	Radiologic Clinics of North America 2006 44 (6) p837-861 First-Trimester Screening Nyberg, D. A.	Narrative review with no original data
228	Seminars in Perinatology 2005 29 (5) p312-320 Prenatal diagnosis and multiple pregnancy Cleary-Goldman, J.	Narrative review with no original data
229	Seminars in Perinatology 2005 29 (4) p258-262 First-trimester risk assessment: Twin gestations Platt, L. D.	Narrative review with no original data
371	Ultrasound in Obstetrics and Gynecology 2009 34 (5) p491-493 Nuchal translucency screening in monochorionic twin pregnancies Zoppi, M. A.	Narrative review with no original data
85	Ultrasound in Obstetrics and Gynecology 1999 13 (5) p377-378 Importance of nuchal translucency measurement in multifetal pregnancy reduction Monni, G.	Case study of quadruplets
372	Ultrasound in Obstetrics and Gynecology 1995 5 (1) p20-25 The implementation of first-trimester scanning at 10-13 weeks' gestation and the measurement of fetal nuchal translucency thickness in two maternity units Pandya, P. P.	No test accuracy data. Only one fetus in multiple pregnancy had raised nuchal translucency and no diagnostic test performed
373	Ultrasound Quarterly 2007 23 (2) p107-116 Nuchal translucency and first trimester risk assessment: A systematic review Sheppard, C.	Narrative review with no original data
374	Western Journal of Medicine 1993 159 (3) p273-285 Fetal ultrasonography Garmel, S. H.	Narrative review with no original data
55	Ultrasound in Obstetrics and Gynecology 2005 26 (5) p512-516 Growth discrepancy in twins in the first trimester of pregnancy Salomon, L. J.	Not a prediction study
375	Prenatal Diagnosis 2004 24 (10) p774-780 First-trimester combined ultrasound and biochemical screening for Down syndrome in routine clinical practice Stenhouse, E. J.	No multiple pregnancy data
376	Prenatal Diagnosis 2003 23 (6) p496-500 Absence of fetal nasal bone and aneuploidies at first-trimester nuchal translucency screening in unselected pregnancies Zoppi, M. A.	Multiple pregnancy data not reported separately
377	Gynecologic and Obstetric Investigation 2000 49 (4) p221-226 Multiple screening for fetal Down's syndrome with the classic triple test, dimeric inhibin A and ultrasound	No multiple pregnancy data

No.	Bibliographic information	Reason for exclusion
	Debieve, F.	
378	Clinical Obstetrics and Gynecology 1982 25 (4) p635-658 The prenatal diagnosis of genetic disorders. Simpson, J. L.	Narrative review with no original data
379	Journal of Medical Screening 1997 4 (4) p181-246 Antenatal screening for Down's syndrome Wald, N. J.	Narrative review with no original data
27	Ultrasound Obstet Gynecol 2001 17 p209-216 Outcome of first trimester chorionic villus sampling for genetic investigation in multiple pregnancy. Brambati, B.	No index test
380	Journal of Ultrasound in Medicine 1995 14 p565-568 Nuchal translucency thickness and crown-rump length in twin pregnancies with chromosomally abnormal fetuses Pandya, P.P.	Retrospective review of crown-rump length in pregnancies where at least one fetus was confirmed as having a chromosomal abnormality. Not a prediction study
381	Prenatal Diagnosis 1999 19 p727-731 Comparison of nuchal translucency measurement and second-trimester triple serum screening in twin versus singleton pregnancies Maymon (1999)	Not possible to calculate individual fetal rates as true positives not reported
382	Prenatal Diagnosis 2010 30 (9) p827-833 Down syndrome risk calculation for a twin fetus taking account of the nuchal translucency in the co-twin Cuckle, H.	Not a predictive study
383	Cochrane Database of Systematic Reviews 2010 (4) Antenatal screening for Down's syndrome: generic protocol Alldred, K. S.	This is a protocol only and the full review is not yet available
384	Prenatal Diagnosis 2010 30 (4) p352-356 First trimester maternal serum ADAM12s levels in twin pregnancies Linskens, I. H.	Not a predictive study
385	Ultrasound in Obstetrics and Gynecology 2010 35 (5) p548-551 Color Doppler twinkling artifact in fetuses with echogenic intracardiac foci: echocardiographic observation and clinical significance Zhao, B. W.	Not a predictive study. Number of twins/triplets (if any) not reported
386	Chinese Medical Journal 2010 123 (5) p555-558 Comparison of second-trimester maternal serum free-beta-human chorionic gonadotropin and alpha-fetoprotein between normal singleton and twin pregnancies: A population-based study Zheng, M. M	Not a predictive study
387	Prenatal Diagnosis 2010 30 (5) p413-417 Distributions of current and new first-trimester Down	Not a predictive study

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
	syndrome screening markers in twin pregnancies Koster, M. P.	
382	Prenatal Diagnosis 2010 30 (9) p827-833 Down syndrome risk calculation for a twin fetus taking account of the nuchal translucency in the co-twin Cuckle, H.	Not a predictive study
388	Fertility and Sterility 2010 #2010 Denver, CO United States. Conference Start (var.pagings) pS122 Trophecterm biopsy for aneuploidy testing: Preliminary observations and ongoing pregnancies Feinberg, R. F.	Conference abstract
389	Ultrasound in Obstetrics and Gynecology 2010 35 (2) p172-177 Mitral valve-tricuspid valve distance as a sonographic marker of trisomy 21 Grace, D.	Data on multiple pregnancy were not reported separately
390	Prenatal Diagnosis 2010 30 (10) p981-987 Ancillary benefits of prenatal maternal serum screening achieved in the California program Kazerouni, N. N.	Data on multiple pregnancy were not reported separately
256	Prenatal Diagnosis 2010 30 (10) p1005-1006 Prenatal diagnosis of polysplenia syndrome associated with increased nuchal translucency Koyama, S.	Letter to editor reporting a case of polysplenia syndrome (case report)
391	Ultrasound in obstetrics & gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology 2010 35 (5) p578-582 Lung tissue perfusion in congenital diaphragmatic hernia and association with the lung-to-head ratio and intrapulmonary artery pulsed Doppler Moreno-Alvarez, O.	Based on exclusively on data from singleton pregnancies
392	Cochrane Database of Systematic Reviews 2009 (1) Amniotic fluid index versus single deepest vertical pocket as a screening test for preventing adverse pregnancy outcome Nabhan, A. F.	Cochrane review consisting of studies of singleton pregnancies. No data on multiple pregnancy reported
393	European Heart Journal 2010 #2010 Stockholm Sweden. Conference Start (var.pagings) p27 Risk factors for disease development and predictors of outcome in peripartum cardiomyopathy Ntusi, N. B. A.	Conference abstract
255	Ultrasound in Obstetrics and Gynecology 2010 36 (4) p404-411 First-trimester combined screening for trisomy 21 at 7-14 weeks' gestation Wright, D.	Based exclusively on data from singleton pregnancies

Screening for structural abnormalities

Review question

When and how should screening be used to identify structural abnormalities in multiple pregnancies?

No.	Bibliographic information	Reason for exclusion
73	Acta Geneticae Medicae et Gemellologiae 1996 45 (4) p461-469 Maternal and neonatal variables in twins: an epidemiological approach Campana, M. A.	British Library unable to supply
74	Acta Geneticae Medicae et Gemellologiae 1997 46 (2) p101-104 The sonographic prenatal diagnosis of congenital defects of the anterior abdominal wall based on our own study of twin pregnancies--gastroschisis Malinowski, W.	British Library unable to supply
75	Minerva Ginecologica 2009 61 (3) p239-244 Congenital heart defects in twin gestations Campbell, K. H.	British Library unable to supply
76	Journal of Ultrasound in Medicine 2001 20 (10) p1117-1127 Fetus acardius: two- and three-dimensional ultrasonographic diagnoses Bonilla-Musoles, F.	Not a population of interest
77	International Journal of Cardiology 7-10-2005 102 (2) p293-296 Congenital heart disease in a population of dizygotic twins: an echocardiographic study Caputo, S.	Review article no original data
78	Baillieres Clinical Obstetrics and Gynaecology 1998 12 (1) p19-36 Screening for fetal abnormalities in multiple pregnancies Sebire, N. J.	Review article no original data

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
79	Best Practice and Research in Clinical Obstetrics and Gynaecology 2004 18 (4) p531-542 What prenatal diagnosis should be offered in multiple pregnancy? Bhide, A.	Review article no original data
80	Best Practice and Research in Clinical Obstetrics and Gynaecology 2004 18 (4) p557-576 Obstetric complications of twin pregnancies Rao, A.	Review article no original data
81	Best Practice and Research in Clinical Obstetrics and Gynaecology 2000 14 (4) p581-594 The 11-14 week scan Nicolaidis, K. H.	Review article no original data
82	British Journal of Midwifery 2005 13 (10) p638-642 Twin pregnancies: evaluating risk through fetal monitoring Blincoe, A. J.	Review article no original data
83	Prenatal Diagnosis 1997 17 (13) p1207-1225 The case for routine determination of chorionicity and zygosity in multiple pregnancy Bajoria, R.	Review article no original data
84	Birth Defects Research 2003 67 (10) p879-885 Increased risk of birth defects among children from multiple births Li, S. J.	Does not report diagnostic accuracy data, just incidence data

No.	Bibliographic information	Reason for exclusion
85	<p>Ultrasound in Obstetrics and Gynecology 1999 13 (5) p377-378 Importance of nuchal translucency measurement in multifetal pregnancy reduction Monni, G.</p>	<p>This is a letter outlining a case study of quadruplets</p>
86	<p>American Journal of Medical Genetics 3-12-1999 83 (2) p117-124 Congenital malformations in twins: an international study Mastroiacovo, P.</p>	<p>Prevalence data for congenital anomalies in twins but ascertainment antenatal and postnatal diagnosis not reported separately therefore no diagnostic accuracy data</p>
87	<p>Human Reproduction 2002 17 (11) p3004-3005 Neonatal outcome and congenital malformations in children born after IVF Merlob, P.</p>	<p>Letter - no original data</p>
88	<p>Human Reproduction 2008 23 (6) p1306-1311 Congenital anomalies in twins: a register-based study Glinianaia, S. V.</p>	<p>Prevalence data for congenital anomalies in twins but ascertainment antenatal and postnatal diagnosis not reported separately therefore no diagnostic accuracy data</p>
89	<p>Best Practice and Research in Clinical Obstetrics and Gynaecology 2000 14 (4) p663-675 Prenatal diagnosis in multiple pregnancy Taylor, M. J.</p>	<p>Review article - no original data</p>
90	<p>American Journal of Obstetrics and Gynecology 1996 175 (5) p1142-1145 The impact of routine obstetric ultrasonographic screening in a low-risk population Skupski, D. W.</p>	<p>No subgroup analysis for multiple pregnancies</p>

No.	Bibliographic information	Reason for exclusion
91	American Journal of Obstetrics and Gynecology 1998 179 (4) p978-981 Accurate detection of anomalies by routine ultrasonography in an indigent clinic population Magriples, U.	No subgroup analysis for multiple pregnancies
92	American Journal of Obstetrics and Gynecology 1991 165 (4 Pt 1) p1056-1060 Ultrasonographic diagnosis of congenital anomalies in twins Allen, S. R.	Published before 1995
93	Obstetrics and Gynecology 1999 94 (6) p1011-1019 Central nervous system abnormalities assessed with prenatal magnetic resonance imaging Levine, D.	No postbirth test for abnormalities, strong selection bias (only included in study if abnormal sonogram), no subgroup analysis for twins and/or triplets
94	Ultrasound in Obstetrics and Gynecology 2001 18 (3) p289-290 Three-dimensional sonographic diagnosis of cephalothoracopagus janiceps twins at 13 weeks Biswas, A.	Letter
95	Obstetrics and Gynecology 2006 107 (3) p685-693 Dandy-Walker malformation complex: correlation between ultrasonographic diagnosis and postmortem neuropathology Phillips, J. J.	No subgroup analysis for multiple pregnancies
96	Health Technology Assessment (Winchester, England) 2001 4 (16) pi-vi Ultrasound screening in pregnancy: a systematic review of the clinical effectiveness, cost-effectiveness and women's views Bricker, L.	No subgroup analysis for multiple pregnancies – individual studies have been considered for inclusion

No.	Bibliographic information	Reason for exclusion
97	Maternal-Child Nursing Care: Optimizing Outcomes for Mothers, Children & Families 2009 p.291-351 Chapter 11: caring for the woman experiencing complications during pregnancy Philadelphia, PA :F.A. Davis Company ISBN=978-0-8036-1486-4	British Library unable to supply
98	ACOG Clinical Review 7-20-2007 12 (4) p5-5 Infertility and congenital anomalies in offspring	British Library unable to supply
99	Acta Geneticae Medicae et Gemellologiae 1998 47 (2) p75-87 Twin reversed arterial perfusion syndrome Malinowski, W.	British Library unable to supply
100	Acta Geneticae Medicae et Gemellologiae 1996 45 (3) p387-394 Prenatal ultrasound diagnosis of cystic hygroma occurring in twin pregnancies Malinowski, W.	Five cases of cystic hygroma, unclear if all multiple pregnancy
101	Acta Obstetrica et Gynaecologica Japonica 1997 49 (8) p452, 1997 Routine ultrasound screening for all pregnant women: Dose it make a difference? Frigoletto, F. D. J.	No diagnostic accuracy data
102	Acta Obstetrica et Gynecologica Scandinavica 2001 80 (4) p287-299 Twin pregnancy: The role of ultrasound in management Sperling, L.	Narrative review with no new data
103	Advances in Clinical and Experimental Medicine 2006 15 (3) p491-496 Sonographic evaluation of fetuses in twin pregnancies Krason, A.	No reference standard. Anomalies detected by ultrasound reported but not reported if confirmed postnatally
104	AJR 1995 American Journal of Roentgenology. 164 (4) p973-979 Anomalies of the fetal skeleton: sonographic findings Bowerman, R. A.	Narrative review of case-study data
105	American Journal of Medical Genetics, Part C: Seminars in Medical Genetics 2009 151 (2) p155-161 MFM/geneticist view on prenatal management of twins O'Brien, B. M.	Narrative review - no original data
106	American Journal of Medical Genetics 2-1-2006 Part A. 140 (3) p272-275 Diagnosis and management of heterokaryotypic monochorionic twins Lewi, L.	Five cases of abnormality but no reference standard (postnatal confirmation) reported
107	American Journal of Obstetrics and Gynecology 1997 177 (4) p849-852 Outcome of twin gestations with a single anomalous fetus Alexander, J. M.	No prediction. This study compared outcomes (positive or adverse) between twin pregnancies with one anomaly and those with no anomalies
108	American Journal of Perinatology 1996 13 (6) p355-361 Prenatal diagnosis and perinatal aspects of abdominal wall	Case series of abdominal wall defects, no control group for diagnostic

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
	defects Chen, C. P.	accuracy data
109	Annales de Genetique 2002 45 (3) p115-121 Impact of prenatal diagnosis on livebirth prevalence of children with congenital anomalies Stoll, C.	No multiple pregnancy data
110	Annales de Genetique 2002 45 (1) p21-27 Evaluation and evolution during time of prenatal diagnosis of congenital heart diseases by routine fetal ultrasonographic examination Stoll, C	No multiple pregnancy data
111	Annals of the Academy of Medicine, Singapore 2003 32 (3) p289-293 Advances in imaging in prenatal diagnosis and fetal therapy Tan, T. Y.	Narrative review - no original data
112	Annals of the New York Academy of Sciences 1998 847 (pp 220-227)-227 Legal problems related to obstetrical ultrasound Sanders, R. C.	Narrative review of case studies
113	Archives of Gynecology and Obstetrics 2002 266 (4) p187-192 Comparison of ductus venosus blood flow waveform indices of 607 singletons with 133 multiples at 10-14 weeks gestation. An evaluation in uncomplicated pregnancies Germer, U.	Ductus venosus Doppler in normal fetuses only, no prediction of anomaly
114	Birth Defects Research 2009 85 (8) p677-694 Pena-Shokeir phenotype (fetal akinesia deformation sequence) revisited Hall, J. G	Narrative review, no multiple pregnancy data
115	Birth Defects Research Part A - Clinical and Molecular Teratology 2006 76 (3) p187-Clinical Descriptive epidemiology of anophthalmia and microphthalmia, Hawaii, 1986-2001 Forrester, M. B.	No diagnostic accuracy data, incidence only
116	BJOG: an International Journal of Obstetrics and Gynaecology 2006 113 (3) p295-300 Prenatal diagnosis and outcome of congenital cytomegalovirus infection in twin pregnancies Yinon, Y.	Inappropriate index test-serological diagnosis of cytomegalovirus infection
117	BJOG: an International Journal of Obstetrics and Gynaecology 2001 108 (9) p937-942 Modelling the potential impact of population-wide periconceptional folate/multivitamin supplementation on multiple births Lumley, J.	Prevalence data only - no diagnostic accuracy data
118	BJOG: an International Journal of Obstetrics and Gynaecology 2001 108 (9) p931-936 Management of monoamniotic twin pregnancies: a case series and systematic review of the literature. [35 refs] Allen, V. M.	No diagnostic accuracy data. Anomalies reported but unclear if diagnosed antenatally
119	British Journal of Midwifery 2007 15 (5) p266 Challenges of twin pregnancy Khalil, A.	Narrative review, no original data

No.	Bibliographic information	Reason for exclusion
120	British Journal of Obstetrics and Gynaecology 1998 105 (6) p661-666 Fetal cardiac function and septal thickness in diabetic pregnancy: a controlled observational and reproducibility study Macklon, N. S.	Reproducibility study - no diagnostic accuracy data
121	British Medical Journal 2004 328 (7446) p1002-1006 Recent developments in fetal medicine Kumar, S.	Narrative review, no original data
122	Clinical Obstetrics and Gynecology 2008 51 (1) p37-47 The use of nuchal translucency in contemporary obstetric practice Said, S.	Only reports on chromosomal abnormalities
123	Clinical Obstetrics and Gynecology 1998 41 (1) p84-93 How should the efficacy of prenatal care be tested in twin gestations? Keith, L.	Narrative review with no new data
124	Clinics in Perinatology 2009 36 (2) p417-430 Complicated Monochorionic Twin Pregnancies: Updates in Fetal Diagnosis and Treatment Rand, L.	Narrative review with no original data
125	Clinics in Perinatology 2005 32 (2) p329-354 Ultrasound in multiple gestations: Twins and other multifetal pregnancies Monteagudo, A.	Narrative review with no new data
126	Clinics in Perinatology 2001 28 (2) p333-352 First-trimester ultrasound Snijders, R.	Narrative review with no new data
127	Cochrane Database of Systematic Reviews 2009 Periconceptional supplementation with folate and/or multivitamins for preventing neural tube defects Lumley, Judith	Review of intervention studies. Screening/prediction for structural abnormalities was not reported in this study
128	Cochrane Database of Systematic Reviews 2000 (2) pCD000182 Ultrasound for fetal assessment in early pregnancy Neilson, J. P.	Screening/prediction for structural abnormalities was not reported in this study
129	Contemporary Ob/Gyn 2002 47 (8) p75 Ultrasound clinics. Diagnosis of monoamniotic twins Roque, H.	Narrative review, diagnosis of monoamnicity
130	Croatian Medical Journal 2003 44 (6) p734-739 Monochorionic twin pregnancy: retrospective analysis of predicted pregnancy outcome Matijevic, R.	Does not report prediction of outcomes. Outcomes not linked to results of ultrasound scan
131	Croatian Medical Journal 2000 41 (3) p266-269 Nuchal translucency in multiple pregnancies Monni, G.	No prediction. This study reported a diagnosis and follows up with a pregnancy outcome (either birth or termination)

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
132	Current Obstetrics and Gynaecology 2004 14 (2) p92-98 Role of ultrasound in obstetrics Vankayalapati, P.	Narrative review, no original data
133	Current Obstetrics and Gynaecology 2004 14 (4) p239-246 Multiple pregnancy Duncan, K. R.	Narrative review, no original data
134	Current Obstetrics and Gynaecology 2001 11 (2) p78-85 Role of ultrasound in obstetrics Hollis, B.	Narrative review, no original data
135	Current Obstetrics and Gynaecology 1998 8 (3) p182-184 Multiple pregnancy Whittle, M.	Narrative review, multiple choice questions, no original data
136	Current Opinion in Obstetrics and Gynecology 2008 #20 (2) p139-145 Screening for fetal abnormalities with ultrasound Flood, K.	Screening/prediction for structural abnormalities in twin or triplet pregnancies not reported
137	Current Opinion in Obstetrics and Gynecology 2006 18 (3) p319-324 Nuchal translucency in pregnancies conceived after assisted reproduction technology Hui, P. W.	Only reports on chromosomal abnormalities. Not a predictive study
138	Current Opinion in Obstetrics and Gynecology 2005 17 (2) p185-195 Ultrasound and fetal diagnosis Filkins, K.	Narrative review with no new data
139	Current Opinion in Obstetrics and Gynecology 2003 15 (2) p177-194 Monochorionic diamniotic twins: Complications and management options Lewi, L.	Screening/prediction for structural abnormalities in twin or triplet pregnancies not reported
140	Current Opinion in Obstetrics and Gynecology 2002 14 (2) p169-175 Prenatal diagnosis for multiple pregnancies Dommergues, M.	Narrative review with no new data
141	Current Opinion in Obstetrics and Gynecology 2000 12 (2) p87-92 The challenge of prenatal diagnosis in twin pregnancies Jenkins, T. M.	Narrative review with no new data
142	Current Opinion in Obstetrics and Gynecology 1997 9 (2) p96-101 Fetal testing in twins Denbow, M. L.	Narrative review with no new data
143	Current Opinion in Obstetrics and Gynecology 1997 9 (2) p136-139 Congenital abnormalities in twins: Selective termination Stewart, K. S.	Screening/prediction for structural abnormalities in twin or triplet pregnancies not reported
144	Current Problems in Diagnostic Radiology 2000 29 (4) p109-140 Fetal ultrasound Kennedy, A.	Narrative review, no original data
145	Database of Abstracts of Reviews of Effects 2010 (1) Antenatal ultrasound scanning (Structured abstract) Centre for Reviews and Dissemination.	Structured abstract. Full paper is not relevant as it reports on routine versus selective ultrasound in

No.	Bibliographic information	Reason for exclusion
		predicting general fetal outcome (not specific to structural abnormalities). No subgroup analysis for twins and/or triplets
146	Database of Abstracts of Reviews of Effects 2010 (1) Ultrasound screening in pregnancy: a systematic review of the clinical effectiveness, cost-effectiveness and women's views (Structured abstract) Centre for Reviews and Dissemination.	Structured abstract. Full paper has been considered separately for this question
147	Developmental Medicine and Child Neurology 2008 50 (12) p958-960 'Non-syndromic encephalocele: A 26-year experience' Joo, J. G.	Two sets of multiple pregnancies. Incomplete true positive, false positive, false negative and true negative data
148	Early Human Development 2008 84 (3) p173-179 The influence of twinning on cardiac development Manning, N.	Narrative review, no original data
149	Early Human Development 2006 82 (6) p365-370 The management of multiple pregnancy Taylor, M. J.	Narrative review, no original data
150	Early Pregnancy 1997 3 (1) p38-51 Current progress in early pregnancy investigation Polliotti, B. M.	Narrative review, no original data
151	Early Pregnancy [Electronic Resource] 2000 4 (4) p261-270 First trimester diagnosis of acardiac twins Coulam, C. B.	British Library unable to supply
152	European Journal of Paediatric Neurology 2010 14 (2) p150-155 Congenital hydrocephalus--prevalence, prenatal diagnosis and outcome of pregnancy in four European regions Garne, E.	Nine cases of congenital hydrocephalus from multiple pregnancy but no denominator data for total number of multiple pregnancies reported
153	European Journal of Obstetrics, Gynecology, and Reproductive Biology 5-1-2006 126 (1) p132-133 First trimester diagnosis of conjoined twins in a triplet pregnancy Suzumori, N.	Case report
154	European Journal of Obstetrics, Gynecology, and Reproductive Biology 2001 99 (1) p19-24 Chromosomal defects and associated malformations in fetal cleft lip with or without cleft palate Perrotin, F.	No multiple pregnancy data
155	Fetal and Maternal Medicine Review 2001 12 (2) p93-103 Doppler ultrasound in twin pregnancy Giles, W.	Antenatal Doppler to predict perinatal mortality rather than structural anomaly
156	Fetal Diagnosis and Therapy 2006 21 (2) p198-203 Congenital heart diseases in twin pregnancies Hajdu, J.	Cases with cardiac abnormalities only, no diagnostic accuracy data

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
157	Fetal Diagnosis and Therapy 2005 #20 (4) p244-248 Perinatal outcomes of twin pregnancies discordant for major fetal anomalies Gul, A.	Inappropriate reference standard, study reports survival or death but not confirmation of anomaly
158	Fetal Diagnosis and Therapy 2001 16 (3) p178-186 Outcome of the prenatally diagnosed congenital cystic adenomatoid lung malformation: a Canadian experience Labege, J. M.	No multiple pregnancy data
159	Fetal Diagnosis and Therapy 2000 15 (6) p364-372 Ultrafast scan magnetic resonance in prenatal diagnosis Wagenvoort, A. M.	Only two sets of twins reported
160	Fetal Diagnosis and Therapy 1999 14 (1) p53-59 Acardiac twins: pathophysiology, diagnosis, outcome and treatment. Six cases and review of the literature Sogaard, K.	TRAP sequence for six twin pregnancies but no postnatal reference standard except survival outcome for donor twin
161	Fetal Diagnosis and Therapy 1996 11 (3) p181-190 Outcome of urological abnormalities prenatally diagnosed by ultrasound Podevin, G.	No multiple pregnancy data
162	Gynaecologia et Perinatologia 2006 15 (3) p119-130 Recent advances in the assessment of multifetal pregnancies by 3D/4D sonography Kurjak, A.	Narrative review with no new data
163	Health Technology Assessment 2000 4 (16) pi-183 Ultrasound screening in pregnancy: A systematic review of the clinical effectiveness, cost-effectiveness and women's views Bricker, L.	Structured abstract. Full paper has been considered separately for this question
164	Hrvatska Revija Za Rehabilitacijska Istrazivanja 2001 37 (1) p77-89 Three dimensional (3D) sonography in the early detection of morphologic and genetic disorders Kos, M.	British Library unable to supply
165	Human Reproduction 2009 24 (3) p726-731 Congenital anomalies in multiple births after early loss of a conceptus Pharoah, P. O.	Incidence of congenital anomaly but no diagnostic accuracy data
166	Human Reproduction 2001 16 (9) p1999-2004 Nuchal translucency measurement and pregnancy outcome after assisted conception versus spontaneously conceived twins Maymon, R.	No reference standard. Four cases of TOP for antenatally diagnosed neural tube defect but no postnatal confirmation reported
167	Human Reproduction 1999 14 (8) p2102-2105 The feasibility of nuchal translucency measurement in higher order multiple gestations achieved by assisted reproduction Maymon, R.	Nuchal translucency measured but no structural or chromosomal abnormalities in this series

No.	Bibliographic information	Reason for exclusion
168	Human Reproduction 1999 14 (10) p2629-2634 Genetic sonography as the preferred option of prenatal diagnosis in patients with pregnancies following intracytoplasmic sperm injection Geipel, A.	Unable to obtain test accuracy data as total number of multiple pregnancies that underwent index test (second trimester ultrasound) is unclear
169	Infertility and Reproductive Medicine Clinics of North America 1998 9 (3) p387-398 Prenatal care in multiple gestation Wong, G.	Narrative review, no original data
170	International Journal of Gynaecology and Obstetrics 2002 79 (3) p225-228 Prenatal course and pregnancy outcome of fetuses with a transient nuchal translucency Fukada, Y.	No multiple pregnancy data
171	International Journal of Technology Assessment in Health Care 2001 17 (3) p275-304 The accuracy and effectiveness of routine population screening with mammography, prostate-specific antigen, and prenatal ultrasound: a review of published scientific evidence. [269 refs] Woolf, S. H.	Narrative review, no original data
172	International Journal of Clinical Practice 1997 51 (5) p305-307 Difficulties and dilemmas in the management of congenital anomalies in twin pregnancy. [20 refs] Edozien, L. C.	Narrative review, no original data
173	Jcpsp, Journal of the College of Physicians and Surgeons - Pakistan 2007 17 (11) p691-693 Acardiac twins: a case series Yaqoob, J.	British Library unable to supply
174	Jk Practitioner 2006 13 (3) p151 Acardiac twin Rizvi, S. M.	British Library unable to supply
175	Journal D'Echographie et de Medecine Par Ultrasons 1998 19 (2-3) p100-103 Routine ultrasound at 10-14 weeks of pregnancy Snijders, R.	No multiple pregnancy data
176	Journal of Craniofacial Surgery 2008 #19 (5) p1195-1198 Fetal diagnosis of cleft lip: natural history and outcomes Liu, Y.	One twin pregnancy only
177	Journal of Diagnostic Medical Sonography 9-20-2002 18 (5) p328-331 Identical twins presenting with Dandy-Walker malformation and twin-twin transfusion Lennon, K.	Case report
178	Journal of Diagnostic Medical Sonography 3-20-2000 16 (2) p65-67 Prenatal diagnosis of twin reversed arterial perfusion sequence Messina, L. P.	Case report - TRAP sequence
179	Journal of Maternal-Fetal and Neonatal Medicine 2008 21 (11) p839-842 Dandy-Walker syndrome and monochorionic twins: insight into a possible etiological mechanism Kontopoulos, E. V.	No prediction. This study reported the incidence of Dandy-Walker syndrome, fetofetal transfusion syndrome and IUGR

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
180	Journal of Medical Ultrasound 2000 8 (2) p124-125 Assessment of fetal blood flow and fetal cardiac disease using Color Doppler ultrasonography: A research letter Banu, S.	No multiple pregnancy data
181	Journal of Obstetrics and Gynaecology 2008 28 (7) p678-682 Fetal congenital anomalies diagnosed by ultrasound in Asian and non-Asian women Atkinson, D. E.	No multiple pregnancy data
182	Journal of Obstetrics and Gynaecology Research 2006 32 (1) p42-46 Real-time 3-D echocardiographic evaluation of the fetal heart using instantaneous volume-rendered display Hata, T.	One twin pregnancy only
183	Journal of Obstetrics and Gynaecology Canada: JOGC 2005 27 (11) p1048-1062 Amended Canadian guideline for prenatal diagnosis (2005) change to 2005-techniques for prenatal diagnosis Wilson, R. D.	Narrative review - no original data
184	Journal of Perinatal Medicine 2007 35 (1) p10-27 How useful is 3D and 4D ultrasound in perinatal medicine? Kurjak, A.	Narrative review with no new data
185	Journal of Perinatal Medicine 2007 35 (5) p425-430 Monochorionic twins in which at least one fetus has a congenital heart disease with or without twin-twin transfusion syndrome Hidaka, N.	No prediction data (incidence only). Method of detection not reported
186	Journal of Perinatal Medicine 2001 29 (3) p212-221 The use of first trimester ultrasound in routine practice Sen, C.	Narrative review with no new data
187	Journal of Reproductive Medicine for the Obstetrician and Gynecologist 2001 46 (7) p697-698 Prenatal diagnosis of meconium peritonitis in twin pregnancy after intracytoplasmic sperm injection [1] Weng-Hsiang, Su	Letter - no original data
188	Journal of the Medical Association of Thailand 2005 88 Suppl 8 pS215-S220 Efficacy of fetal echocardiography and an evaluation of indications Soongswang, J.	British Library unable to supply
189	Journal of Tropical Pediatrics 1998 44 (4) p235-240 Antenatal diagnosis of congenital renal malformations using ultrasound Antenatal diagnosis of congenital renal malformations using ultrasound Sanghvi, K. P.	Only one twin pregnancy
190	Journal of Ultrasound in Medicine 2006 25 (6) p745-755 Applications of 2-dimensional matrix array for 3- and 4-dimensional examination of the fetus: A pictorial essay Goncalves, L. F.	No data for multiple pregnancy
191	Journal of Ultrasound in Medicine 2001 #20 (4) p317-327 Three-dimensional quantitative echocardiographic assessment of	No data for multiple pregnancy

No.	Bibliographic information	Reason for exclusion
	ventricular volume in healthy human fetuses and in fetuses with congenital heart disease Meyer-Wittkopf, M.	
192	Journal of Ultrasound in Medicine 1996 15 (1) p1-9 Three-dimensional echocardiographic evaluation of fetal heart anatomy and function: Acquisition, analysis, and display Nelson, T. R.	Technical aspects of echocardiography rather than diagnostic accuracy, and unclear if multiple pregnancy
193	Newborn & Infant Nursing Reviews 2007 7 (4) p197-204 Prenatal imaging Kline-Fath, B.	Narrative review, no original data
194	Newborn & Infant Nursing Reviews 2002 2 (2) p90-104 Perinatal cardiology Cuneo, B. F.	Narrative review, no original data
195	Nigerian Journal of Medicine: Journal of the National Association of Resident Doctors of Nigeria 2002 11 (2) p50-55 The role of ultrasound in obstetrics Ijaiya, M. A.	British Library unable to supply
196	Ob-Gyn Malpractice Prevention 2002 9 (6) p41-48 Multiple gestations mean multiple risks Garza, M.	Narrative review, no original data
197	Obstetrical and Gynecological Survey 2008 63 (11) p733-745 Fetal neuroimaging: Ultrasound, MRI, or both? Pistorius, L. R.	Narrative review with no new data. No separate review for twins and/or triplets
198	Obstetrical and Gynecological Survey 2006 61 (6) p374-375 Congenital heart diseases in twin pregnancies: Commentary Hajdu, J.	No original data. Narrative review.
199	Obstetrical and Gynecological Survey 1998 53 (11) p715-726 First trimester ultrasonography of multiple gestations: A review Sherer, D. M.	Narrative review with no new data
200	Obstetrics and Gynecology 2008 112 (1) p145-157 Prenatal imaging: Ultrasonography and magnetic resonance imaging Reddy, U. M.	Narrative review with no new data
201	Obstetrics and Gynecology 2006 107 (3) p678-683 Cystic hygromas, nuchal edema, and nuchal translucency at 11-14 weeks of gestation Molina, F. S.	No twin and/or triplet data. Chromosomal abnormalities
202	Obstetrics and Gynecology Clinics of North America 1998 25 (3) p609-621 Sonographic examination of twins: From first trimester to delivery of second fetus Hendrix, N. W.	Narrative review with no new data
203	Obstetrics and Gynecology 1997 89 (5 Pt 1) p763-767 Prenatal diagnosis of fetal primary cytomegalovirus infection Lipitz, S.	Only two twin pregnancies included
204	Obstetrics, Gynaecology and Reproductive Medicine 2007 17 (3) p79-85	Narrative review with no new data

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
	The role of ultrasound in obstetrics Roberts, N.	
205	Pediatric and Developmental Pathology 1999 2 (5) p432-439 Investigation of nonimmune hydrops fetalis: multidisciplinary studies are necessary for diagnosis--review of 94 cases Lallemant, A. V.	No multiple pregnancy data
206	Pediatric Radiology 2010 40 (1) p68-81 MR imaging of the fetal brain Glenn, O. A.	Narrative review, no original data
207	Pediatric Radiology 2006 36 (1) p76-81 MR findings of complicated multifetal gestations Hu, L. S.	Cases with abnormalities on ultrasound referred for magnetic resonance imaging. No diagnostic accuracy data for ultrasound
208	Pediatric Radiology 1996 26 (1) p1-4 Prenatal MRI diagnosis of fetal cerebral tuberous sclerosis Sonigo, P.	No multiple pregnancy data
209	Prenatal Diagnosis 2009 29 (2) p187-189 Prenatal diagnosis of Nager syndrome in a monochorionic-diamniotic twin pregnancy nsart-Franquet, H.	Letter outlining a case study
210	Prenatal Diagnosis 2008 28 (5) p389-398 Fetal genital anomalies: an aid to diagnosis Pajkrt, E.	Unclear how many twins and/or triplets included (if any) and no subgroup analysis
211	Prenatal Diagnosis 2006 26 (9) p866-877 Should fetal echogenic cardiac foci be concordant in monochorionic twin pregnancy? Lau, W. L.	Letter regarding structural abnormalities in monochorionic versus dichorionic twin pregnancies. No prediction of outcome and no reference test reported
212	Prenatal Diagnosis 2006 26 (11) p1062-1064 A study to determine the incidence of structural congenital heart disease in monochorionic twins Manning, N.	Study on incidence, not prediction
213	Prenatal Diagnosis 2005 25 (9) p733-734 The twin challenge in prenatal diagnosis Jauniaux, E.	Editorial. Screening/prediction for structural abnormalities in twin or triplet pregnancies not reported
214	Prenatal Diagnosis 2005 25 (7) p567-573 Should determination of the karyotype be systematic for all malformations detected by obstetrical ultrasound? Staebler, M.	Inappropriate reference standard (karyotype)
215	Prenatal Diagnosis 2005 25 (9) p820-826 First-trimester diagnosis of conjoined twins Pajkrt, E.	Selection bias (only included those with diagnosis of conjoined twins on ultrasound) resulting in no true

No.	Bibliographic information	Reason for exclusion
		negative or false negative data. True positive and false positive data unclear
216	Prenatal Diagnosis 2005 25 (9) p796-806 Acardiac anomaly: Current issues in prenatal assessment and treatment Wong, A. E.	Narrative review - no original data
217	Prenatal Diagnosis 2004 24 (10) p833-835 Nuchal translucency and gestational age [1] (multiple letters) Nicolaidis, K. H.	Letter - no original data
218	Prenatal Diagnosis 2002 22 (4) p308-315 Increased fetal nuchal translucency at 11-14 weeks Nicolaidis, K. H.	Narrative review - no original data
219	Prenatal Diagnosis 2002 22 (10) p898-902 Dilated coronary sinus in prenatal echocardiography; identification, associations and outcome hevin-Surugue, E.	One triplet pregnancy others singleton pregnancies
220	Prenatal Diagnosis 2000 #20 (5) p400-403 Prenatal diagnosis of alobar holoprosencephaly by two-dimensional and three-dimensional ultrasound Lai, T. H.	No multiple pregnancy data
221	Prenatal Diagnosis 1996 16 (10) p971-972 Re. 'Agenesis of the ductus venosus in a case of monochorionic twins which mimics twin-twin transfusion syndrome' Machin, G. A.	Letter, no original data
222	Radiologic Clinics of North America 2006 44 (6) p837-861 First-Trimester Screening Nyberg, D. A.	Review - no original data
223	Radiologic Clinics of North America 2003 41 (4) p709-727 Complications of monochorionic twins Feldstein, V. A.	Narrative review with no new data
224	Radiologist 2002 9 (6) p309-315 First-trimester sonographic findings associated with poor intrauterine outcome Rhodes, E.	Narrative review, no original data
225	Radiology 2006 238 (3) p988-996 Three-dimensional US of the fetus: Volume imaging Benacerraf, B. R.	No multiple pregnancy data
226	Seminars in Perinatology 2008 32 (4) p281-287 Antenatal Fetal Assessment: Multifetal Gestation-An Overview Devoe, L. D.	Narrative review, no original data
227	Seminars in Perinatology 2005 29 (5) p282-295 Diagnosis and management of obstetrical complications unique to multiple gestations Graham, G. M., III	Narrative review, no original data

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
228	Seminars in Perinatology 2005 29 (5) p312-320 Prenatal diagnosis and multiple pregnancy Cleary-Goldman, J.	Inappropriate index test, screening for chromosomal anomaly rather than structural
229	Seminars in Perinatology 2005 29 (4) p258-262 First-trimester risk assessment: Twin gestations Platt, L. D.	Narrative review, no original data
230	Seminars in Perinatology 1999 23 (6) p474-483 Troubles with twins: Fetoscopic therapy Milner, R.	Narrative review, no original data
231	Seminars in Perinatology 1995 #19 (5) p404-412 Ultrasound in twin pregnancy Divon, M. Y.	Narrative review, no original data
232	Singapore Medical Journal 2007 48 (12) pe335-e337 Twin reverse arterial perfusion sequence Nik, LahN	Case report, TRAP sequence
233	Taiwanese Journal of Obstetrics and Gynecology 2009 48 (4) p446-450 Limb-body wall complex in one fetus of a dizygotic twin pregnancy conceived by egg donation, in vitro fertilization and embryo transfer: prenatal diagnosis and literature review Chen, C. P.	Case report, limb body wall complex
234	Taiwanese Journal of Obstetrics and Gynecology 2008 47 (1) p126-128 Prenatal diagnosis and management of twin reversed arterial perfusion (TRAP) syndrome Wu, C. J.	Case report, TRAP sequence
235	Twin Research 2001 4 (3) p159-164 The ten commandments in multiple pregnancies Di, RenzoG	Review - no original data
236	Ultrasound 2009 17 (4) p227-230 Twin reversed arterial perfusion syndrome: the role of ultrasound in diagnosis and management Yamoah, K. K.	Case report, TRAP sequence
237	Ultrasound in Obstetrics and Gynecology 2006 28 (5) p653-658 Dilemmas in the management of twins discordant for anencephaly diagnosed at 11 + 0 to 13 + 6 weeks of gestation Vandecruys, H.	Data provided only on cases where there was one fetus with anencephaly, not for normal pregnancies
238	Ultrasound in Obstetrics and Gynecology 2006 27 (5) p517-521 Accurate neurosonographic prediction of brain injury in the surviving fetus after the death of a monochorionic cotwin Simonazzi, G.	No data regarding routine anomaly screening, cases of ultrasound scan for cranial anomalies in surviving twin post intra-uterine death of one twin
239	Ultrasound in Obstetrics and Gynecology 2006 27 (1) p1-5 From obstetric ultrasound to ultrasonographic obstetrics Ville, Y.	Narrative review, no original data
240	Ultrasound in Obstetrics and Gynecology 2002 20 (1) p1-5 Devastation and relief: conflicting meanings of detected fetal	Narrative review, no original data

No.	Bibliographic information	Reason for exclusion
	anomalies Britt, D. W.	
241	Ultrasound in Obstetrics and Gynecology 2000 16 (3) p223-225 First trimester diagnosis of monoamniotic twin pregnancies Sebire, N. J.	Abnormalities in monoamniotic twins but no reference standard (postnatal confirmation) reported
242	Ultrasound in Obstetrics and Gynecology 2000 16 (6) p571-574 Urorectal septum malformation sequence: prenatal sonographic diagnosis in two sets of discordant twins Achiron, R.	Case report of two sets of twins with urorectal septum malformation
243	Ultrasound in Obstetrics and Gynecology 1997 10 (2) p82-85 Monochorionic twin pregnancies: 'les liaisons dangereuses' Ville, Y.	Opinion of another study on fetto-fetal transfusion syndrome
244	Ultrasound Quarterly 2008 24 (4) p249-255 The imaging spectrum of conjoined twins Winkler, N.	Narrative review - no original data
245	Ultrasound Review of Obstetrics and Gynecology 2005 5 (2) p125-134 Ultrasound in multiple pregnancy Arabin, B.	Narrative review - no original data
246	Ultrasound Review of Obstetrics and Gynecology 2004 4 (1) p1 Ultrasound and fetal behavior: An evolving challenge Kurjak, A.	Editorial - no original data
247	Ultrasound Review of Obstetrics and Gynecology 2004 4 (2) p81-92 Ultrasound evaluation of the multifetal gestation Perni, S. C.	Narrative review - no original data
248	Ultrasound Review of Obstetrics and Gynecology 2004 4 (1) p52-58 Fetal behavior in multifetal pregnancies studied by four-dimensional sonography Vecek, N.	Narrative review - no original data
249	West Virginia Medical Journal 2009 105 (2) p27-29 Diagnosis and management of a monochorionic/monoamniotic twin gestation discordant for fetal anomalies Cuppert, C. D.	Case report
250	British Journal of Radiology 1992 65 (775) p564-569 Routine radiographer screening for fetal abnormalities by ultrasound in an unselected low risk population Shirley, I. M.	Published before 1995 (and no subgroup analysis for twin/triplet pregnancies)
251	Ultrasound in Obstetrics and Gynecology 1995 6 (1) p43-49 Predictive value of antepartum ultrasound examination for anomalies in twin gestations Edwards, M.S.	High risk population – not representative of normal screening population
252	Prenatal Diagnosis 2005 25 (5) p403-406 Diagnosis and outcome of congenital heart disease in fetuses from multiple pregnancies Paladini, D.	High risk population – not representative of normal screening population

No.	Bibliographic information	Reason for exclusion
253	Heart 2002 88 (3) p271-277 Influence of twin-twin transfusion syndrome on fetal cardiovascular structure and function Karatza, A.A.	High risk population – not representative of normal screening population
254	Journal of Internal Medicine 2010 268 (3) p279-285 Gallstone disease in Swedish twins: risk is associated with ABCG8 D19H genotype Katsika, D.	Examined genetic association of gallstone disease in monozygotic twin pairs. Not an antenatal screening study
255	Ultrasound in Obstetrics and Gynecology 2010 36 (4) p404-411 First-trimester combined screening for trisomy 21 at 7-14 weeks' gestation Wright, D.	Based exclusively on data from singleton pregnancies
256	Prenatal Diagnosis 2010 30 (10) p1005-1006 Prenatal diagnosis of polysplenia syndrome associated with increased nuchal translucency Koyama, S.	Letter to editor reporting a case of polysplenia syndrome (case report)
257	Cochrane Database of Systematic Reviews 2010 (5) Fetal and umbilical Doppler ultrasound in high-risk pregnancies Alfirevic, Zarko	Cochrane review regarding fetal assessment in high-risk pregnancies. Not for prediction of chromosomal or structural anomalies
258	Cochrane Database of Systematic Reviews 2010 (5) Antenatal cardiotocography for fetal assessment Grivell, Rosalie M.	Cochrane review on antenatal cardiotocography used to identify fetal hypoxia. Not used for screening for chromosomal or structural anomalies

Monitoring forfeto-fetal transfusion syndrome

Review question

When and how should screening be used to identify feto-fetal transfusion syndrome in multiple pregnancy?

No.	Bibliographic information	Reason for exclusion
33	AJR 1990 American Journal of Roentgenology. 154 (3) p459-469 Monochorionic twinning: sonographic assessment. Filly, R. A.	Review article with no new data
394	Acta Geneticae Medicae et Gemellologiae 1998 47 (3-4) p227-237 Ultrasound in the diagnosis of twin-to- twin transfusion syndrome--a preliminary report Ropacka, M.	Case series comprising only four twin pregnancies
395	Radiology 1987 165 (2) p449-453 Twin gestations: monitoring of complications and anomalies with US Coleman, B. G.	Study population consists of monochorionic and dichorionic twin pregnancies; no separate data for monochorionic pregnancy reported
396	ACOG Clinical Review 11-20-2006 11 (6) p4-4 Cerebral imaging and twin-twin transfusion syndrome	British Library unable to supply
397	Journal of Newborn Nursing 1999 p40-41 Twin to twin transfusion DeLisi, T.	British Library unable to supply
398	Acta Obstetrica et Gynaecologica Japonica 1990 42 (6) p599-604 Significance of twin to twin transfusion syndrome in the prognosis of twin pregnancies and its prenatal diagnosis by ultrasonography Okane, M.	Non-English paper (main text in Japanese)
103	Advances in Clinical and Experimental Medicine 2006 15 (3) p491-496 Sonographic evaluation of fetuses in twin pregnancies Krason, A	Not a prediction study
399	American Journal of Obstetrics and Gynecology 2010 202 (1) p48-7 Amniotic fluid markers of fetal cardiac dysfunction in twin-to-twin transfusion syndrome Van, Mieghem T.	This study assesses prognostic predictive value of fetal biochemical markers to determine fetal cardiac function after laser coagulation of placental anastomoses
400	American Journal of Perinatology 1999 16 (6) p263-267 Twin-to-twin transfusion syndrome with hydrops: a retrospective analysis of ten cases	No screening method is studied

Multiple pregnancy (appendices)

	Hayakawa, M.	
401	American Journal of Obstetrics and Gynecology 1989 160 (4) p913-915 Fetal transfusion syndrome: antenatal factors predicting outcome Bebbington, M. W.	No screening method is studied
402	American Journal of Obstetrics and Gynecology 1989 161 (5) p1111-1113 Perinatal outcome in very preterm births with twin-twin transfusion syndrome Shah, D. M.	Retrospective study reports data on incidence and natural history of feto-fetal transfusion syndrome in very preterm twin pregnancies
403	Archives of Gynecology and Obstetrics 1994 255 (1) p37-42 The value of Doppler ultrasound in the diagnosis and management of twin-to-twin transfusion syndrome Ohno, Y.	Study population includes monochorionic and dichorionic pregnancies; no separate data for monochorionic pregnancies reported
404	Australian and New Zealand Journal of Obstetrics and Gynaecology 2007 47 (3) p158-168 Twin-to-twin transfusion syndrome: is the future getting brighter? Walker, S. P.	Review article with no new data
405	Bailliere's Clinical Obstetrics and Gynaecology 1998 12 (1) p77-89 Doppler ultrasound in multiple pregnancies Giles, W. B.	Review article with no new data
406	Best Practice and Research in Clinical Obstetrics and Gynaecology 2008 22 (1) p63-75 Update on twin-to-twin transfusion syndrome. El, Kateb A	Review article with no new data
407	Best Practice and Research in Clinical Obstetrics and Gynaecology 2004 18 (4) p543-556 How can we diagnose and manage twin-twin transfusion syndrome? Huber, A.	Review article with no new data
408	Clinical Chemistry 2007 53 (6) p1167-1168 Circulating cell-free placental mRNA in the maternal plasma as a predictive marker for twin-twin transfusion syndrome Miura, K.	Index test is measurement of circulating cell-free placental mRNA in maternal plasma - not in the protocol
409	Clinical Obstetrics and Gynecology 2004 47 (1) p181-202 The twin-twin transfusion syndrome Jain, V.	Review article with no new data

410	Clinical Obstetrics and Gynecology 1997 40 (2) p290-302 Current thoughts on twin-twin transfusion syndrome Cincotta, R. B.	Review article with no new data
411	Clinical Obstetrics and Gynecology 1990 33 (1) p32-41 Antepartum management of twin gestation Jones, J. M.	Review article with no new data
412	Clinical Pediatrics 1971 10 (3) p160-163 Management of the twin transfusion syndrome Shorland, J.	Case report
413	Clinics in Perinatology 2009 36 (2) p391-416 Twin-to-Twin Transfusion Syndrome: A Comprehensive Update Habli, M.	Review article with no new data
414	Clinics in Perinatology 2003 30 (3) p591-600 Twin-twin transfusion syndrome Quintero, R. A.	Clinical teaching notes on feto-fetal transfusion syndrome; no screening method reported
415	Croatian Medical Journal 2000 41 (3) p228-234 Twin-twin transfusion syndrome: an update Skupski, D. W.	Review article with no new data
416	Current Opinion in Obstetrics and Gynecology 2002 14 (6) p587-593 Doppler blood flow in obstetrics Detti, L.	Review article with no new data
417	Current Opinion in Obstetrics and Gynecology 1999 11 (2) p125-129 Twin pregnancy Al-Kouatly, H. B.	Review article with no new data
418	Fetal Diagnosis and Therapy 2004 19 (3) p278-285 Clinical evaluation of the risk of twin- to-twin transfusion syndrome using the relative power contribution of fetal heart rate fluctuations Kimura, Y.	Index test is relative power contribution of fetal heart rate fluctuations
419	Fetal Diagnosis and Therapy 1994 9 (5) p283-290 Diagnosis, pathophysiology, and treatment of chronic twin-to-twin transfusion syndrome Weiner, C. P.	Diagnostic accuracy of screening methods was not measured
420	Gynecologic and Obstetric Investigation 1999 48 (4) p237-240 Fetal middle cerebral artery Doppler waveforms in twin-twin transfusion syndrome Suzuki, S.	Index test is fetal middle cerebral artery Doppler

Multiple pregnancy (appendices)

421	Journal of Maternal-Fetal and Neonatal Medicine 2005 18 (2) p79-86 Search for hemodynamic compromise at 11-14 weeks in monochorionic twin pregnancy: is abnormal flow in the ductus venosus predictive of twin-twin transfusion syndrome? Matias, A.	Diagnostic accuracy data not reported
422	Journal of Ultrasound in Medicine 2006 25 (4) p449-454 Instability of Doppler cerebral blood flow in monochorionic twins Degani, S.	This study evaluates Doppler-flow velocity change in cerebral vessels in monochorionic twins
423	Medicine and Health, Rhode Island 2001 84 (5) p165-168 Contemporary evaluation and management of twin-twin transfusion syndrome Carr, S. R.	Review article with no new data
424	Minerva Ginecologica 2009 61 (2) p153-165 Twin-twin transfusion syndrome Rossi, A. C.	Review article with no new data
425	Nippon Ika Daigaku Zasshi - Journal of the Nippon Medical School 1999 66 (5) p300-304 Characteristics of monochorionic-diamniotic growth-retarded twins during the third trimester Suzuki, S.	The study investigates the characteristics of twins with fetofetal transfusion syndrome; no screening strategy is studied
426	Obstetrical and Gynecological Survey 1997 52 (7) p444-455 Prenatal ultrasonographic assessment of the middle cerebral artery: a review Sherer, D. M.	Review article on ultrasound of fetal middle cerebral artery; no original data on fetofetal transfusion syndrome
427	Obstetrics and Gynecology 2004 104 (6) p1289-1297 Twin-twin transfusion syndrome: A population-based study Lutfi, S.	Incidence, mortality and morbidity rates are reported; no data pertaining to any screening method reported
428	Obstetrics and Gynecology 1991 78 (6) p1058-1061 Antenatal diagnosis of twin-twin transfusion syndrome by Doppler ultrasound Yamada, A.	Study population consists of 31 twin pairs – not clear if all of them were monochorionic
429	Obstetrics and Gynecology 1980 55 (6) p678-683 Ultrasonic growth patterns in normal and discordant twins Crane, J. P.	This study reports ultrasonic monitoring of biparietal diameter to screen growth discordancy in twins; not specific to fetofetal transfusion syndrome
430	Perinatology 2003 5 (5) p248-254 Twin to twin transfusion syndrome Deka, D.	Review article with no new data

431	Placenta 2001 22 (5) p383-391 Twin-to-twin transfusion syndrome results from dynamic asymmetrical reduction in placental anastomoses: A hypothesis Sebire, N. J.	A hypothesis on the pathophysiology of fetofetal transfusion syndrome; no screening method is investigated
432	Radiologic Technology 2000 72 (2) p95-100 Ultrasound and twin-twin transfusion syndrome Farley, C. L.	Review article with no new data
433	Seminars In Fetal and Neonatal Medicine 2010 15 (1) p15-20 Twin-to-twin transfusion syndrome: current understanding of pathophysiology, in-utero therapy and impact for future development Bebbington, M.	Report on pathophysiology and <i>in utero</i> therapy; no data on screening method reported
434	Ultrasound in Obstetrics and Gynecology 2005 25 (3) p308-309 Ultrasonographic signs of twin-twin transfusion syndrome in a monoamniotic twin pregnancy [2] Gallot, D.	Letter
435	Ultrasound in Obstetrics and Gynecology 2003 21 (3) p306-307 Prognostic value of nuchal translucency and ductus venosus Doppler in TRAP sequence Labadie, G.	Letter
436	Ultrasound in Obstetrics and Gynecology 1997 9 (1) p30-34 Fetal liver length in twin-twin transfusion syndrome Roberts, A. B.	Index test fetal liver length, not included in the protocol
437	Ultrasound Quarterly 2002 18 (4) p247-254 Understanding twin-twin transfusion syndrome: role of Doppler ultrasound Feldstein, V. A.	Review article with no new data
438	Ultrasound Review of Obstetrics and Gynecology 2003 3 (1) p26-30 Twin-twin transfusion syndrome: The role of ultrasound in diagnosis and therapy Gratacos, E.	Review article with no new data
439	AJR 1993 American Journal of Roentgenology. 161 (5) p1007-1013 Twin pregnancies in the second trimester in women in an alpha-fetoprotein screening program: sonographic evaluation and outcome	Index test is alpha-feto protein screening

Multiple pregnancy (appendices)

	Pretorius, D. H.	
440	Asia-Oceania Journal of Obstetrics and Gynaecology 1992 18 (4) p325-331 Ultrasonography and Doppler studies in twin-to-twin transfusion syndrome Ishimatsu, J.	Study population consists of monochorionic and dichorionic pregnancies
79	Best Practice and Research in Clinical Obstetrics and Gynaecology 2004 18 (4) p557-576 Obstetric complications of twin pregnancies Rao, A.	Review article with no new data
124	Clinics in Perinatology 2009 36 (2) p417-430 Complicated Monochorionic Twin Pregnancies: Updates in Fetal Diagnosis and Treatment Rand, L.	Review article with no new data
126	Clinics in Perinatology 2001 28 (2) p333-352 First-trimester ultrasound Snijders, R.	Review article with no new data
441	Journal of Pediatrics 1995 127 (5) p675-680 Twin-to-twin transfusion syndrome: New perspectives Lopriore, E.	Review article with no new data
442	Obstetrics and Gynecology 1990 76 (4) p714-722 The twin-twin transfusion syndrome Blickstein, I.	Review article with no new data
218	Prenatal Diagnosis 2002 22 (4) p308-315 Increased fetal nuchal translucency at 11-14 weeks Nicolaidis, K. H.	Review article with no new data
231	Seminars in Perinatology 1995 #19 (5) p404-412 Ultrasound in twin pregnancy Divon, M. Y.	Review article with no new data
234	Taiwanese Journal of Obstetrics and Gynecology 2008 47 (1) p126-128 Prenatal diagnosis and management of twin reversed arterial perfusion (TRAP) syndrome Wu, C. J.	Case report of TRAP
61	Minerva Ginecologica 2009 61 (2) p127-139 Ultrasound in the evaluation of twin pregnancy Sfakianaki, A. K.	Review article with no new data
24	Twin Research 2001 4 (3) p141-145 The role of ultrasound in multiple pregnancy Arabin, B.	Review article with no new data

443	Clinical and Experimental Obstetrics and Gynecology 2002 29 (4) p235-241 Role of ultrasound evaluation of nuchal translucency in prenatal diagnosis Borruto, F.	No data on detecting feto-fetal transfusion syndrome reported
444	Ultrasound in Obstetrics and Gynecology 2007 30 (7) p983-987 Relevance of measuring diastolic time intervals in the ductus venosus during the early stages of twin-twin transfusion syndrome Bensouda, B.	Study population is monochorionic twins with feto-fetal transfusion syndrome compared with IUGR, no 'normal' comparison group (monochorionic pregnancies without any other condition) used
445	Ultrasound in Obstetrics and Gynecology 2006 28 (5) p659-664 Timely diagnosis of twin-to-twin transfusion syndrome in monochorionic twin pregnancies by biweekly sonography combined with patient instruction to report onset of symptoms Sueters, M.	Diagnostic results (outcomes) were reported only for the four cases of feto-fetal transfusion syndrome. No data on the participants/comparison group
446	British Journal of Obstetrics and Gynaecology 1998 105 (7) p760-765 Colour Doppler energy insonation of placental vasculature in monochorionic twins: absent arterio-arterial anastomoses in association with twin-to-twin transfusion syndrome Denbow, M. L.	Data from this study are also part of the study by Taylor et al (2000) ⁴⁴⁷ which has been excluded because no useful diagnostic accuracy statistics could be derived from the data
447	Taylor MJO, Denbow ML, Tanawattanacharoen S, et al. Doppler detection of arterio-arterial anastomoses in monochorionic twins: Feasibility and clinical application. Human Reproduction 2000; 15 (7) p1632-1636	No useful data to calculate diagnostic accuracy for screening of feto-fetal transfusion syndrome were reported. Results for early scans (less than 26 weeks) have not been reported separately
448	Ultrasound in Obstetrics and Gynecology 1998 11 (5) p324-327 Inter-twin membrane folding in monochorionic pregnancies Sebire, N. J.	Data reported in this study are part of a recent study by Sebire et al (2000), ⁴⁴⁹ which has been included
450	Ultrasound in Obstetrics and Gynecology 1997 10 (2) p86-89 Increased nuchal translucency thickness at 10-14 weeks of gestation as a predictor of severe twin-to-twin transfusion syndrome Sebire, N. J.	Data reported in this study are part of a recent study by Sebire et al (2000), ⁴⁴⁹ which has been included
451	Journal of Reproductive Medicine 1996 41 (1) p11-14 Twin transfusion syndrome:	This study retrospectively examined association of various antenatal ultrasound findings in pathologically confirmed feto-fetal transfusion

Multiple pregnancy (appendices)

	reassessment of ultrasound diagnosis Jones, J. M.	case. Not a screening study
452	American Journal of Obstetrics and Gynecology 1993 169 (4) p925-930 Twin-to-twin transfusion syndrome: a subset of the twin oligohydramnios-polyhydramnios sequence Bruner, J. P.	Study population was women with twin pregnancies in their second trimester and ultrasonographic findings of marked growth discordance, coexistent oligohydramnios and polyhydramnios in addition to monochorionic placenta. Not a screening study
453	Sperling L, Kiil C, Larsen LU et al. Detection of chromosomal abnormalities, congenital abnormalities and transfusion syndrome in twins. Ultrasound in Obstetrics and Gynecology 2007; 29:(5)517-26.	Study did not report diagnostic accuracy data and also did not allow for the calculation of such data as it reported data for the 17 cases of fetofetal transfusion syndrome and not for the rest of the participants
454	Lewi L, Lewi P, Diemert A et al. The role of ultrasound examination in the first trimester and at 16 weeks' gestation to predict fetal complications in monochorionic diamniotic twin pregnancies. American Journal of Obstetrics and Gynecology 2008; #199:(5)493-493e7.	Study did not report separate results for fetofetal transfusion syndrome from severe discordance or intra-uterine death, which were combined together as 'fetal complications'
363	Casasbuenas A, Wong AE and Sepulveda W. Nuchal translucency thickness in monochorionic multiple pregnancies: value in predicting pregnancy outcome. Journal of Ultrasound in Medicine 2008; 27 (3) p363-369	Not all of the participants received the same reference standard
455	Matias A, Montenegro N, Areias JC. Anticipating twin-twin transfusion syndrome in monochorionic twin pregnancy. Is there a role for nuchal translucency and ductus venosus blood flow evaluation at 11-14 weeks? Twin Research 2000; 3 (2) p65-70	Data reported in this study are believe to be part of a more recent study by same first author ⁴⁵⁶ , which has been included
325	Prenatal Diagnosis 2007 27(10) p922-925 First-trimester ultrasound examination and the outcome of monochorionic twin pregnancies El, Kateb A.	The results of this study are not applicable to national screening programmes
457	American Journal of Obstetrics and Gynecology 2010 203 (1) p3-16 Twin-twin transfusion syndrome: an ethics-based and evidence-based argument for clinical research Stamilio, D. M.	Review article with no new data on accuracy of screening tests for fetofetal transfusion syndrome
458	American Journal of Obstetrics and Gynecology 2010 203 (2) p133-136 Contemporary management of monochorionic diamniotic twins: outcomes and delivery	Retrospective study of a large (n=236) cohort of monochorionic, diamniotic twin pregnancies but no data on accuracy of screening test reported

	recommendations revisited Smith, N. A.	
459	Fetal Diagnosis and Therapy 2010 27 (4) p181-190 Twin anemia-polycythemia sequence: diagnostic criteria, classification, perinatal management and outcome Slaghekke, F.	Review article of TAPS. No data on screening methods of feto-fetal transfusion syndrome
460	Fetal Diagnosis and Therapy 2010 28 (2) p65-71 Ductus venosus in the first trimester: contribution to screening of chromosomal, cardiac defects and monochorionic twin complications Maiz, N.	Review article with no new data on screening of feto-fetal transfusion syndrome
461	Journal of Maternal-Fetal and Neonatal Medicine 2010 23 (6) p573-575 Middle cerebral artery doppler in fetomaternal hemorrhage Huissoud, C.	Case series (n=3) of Doppler studies in fetomaternal haemorrhage
462	Journal of Perinatal Medicine 2010 38 (5) p451-459 Monochorionic twin pregnancy: screening, pathogenesis of complications and management in the era of microinvasive fetal surgery Tchirikov, M.	Literature review with no new study on screening of feto-fetal transfusion syndrome identified
463	Deutsches Arzteblatt International 2010 107 (38) p663-668 Perinatal problems in multiple births Dudenhausen, J. W.	Selective (non-systematic) literature review, no new data reported
464	Placenta 2010 31 (7) p652 Twin anemia-polycythemia sequence with placental arterio-arterial anastomoses Suzuki, S.	Letter to editor (case report)
465	Ginecologia y Obstetricia de Mexico 2010 78 (3) p181-186 [Prevalence and complications of monochorionic diamniotic twin pregnancy]. [Spanish] Torres-Torres, C.	Not an English language publication
466	Seminars In Fetal and Neonatal Medicine 2010 15 (6) p349-356 Specific complications of monochorionic twin pregnancies: twin-twin transfusion syndrome and twin reversed arterial perfusion sequence Chalouhi, G. E.	British Library unable to supply

Monitoring for intrauterine growth restriction

Review question

What is the optimal screening programme to detect intrauterine growth restriction in multiple pregnancies?

No.	Bibliographic information	Reason for exclusion
505	Neilson JP. Detection of the small-for-gestational age twin fetus by a two-stage ultrasound examination schedule. <i>Acta Geneticae Medicae et Gemellologiae</i> 1982; 31:(3-4)235-40.	Study did not report diagnostic accuracy data
506	Eik-Nes SH, Grottum P, Persson PH et al. Prediction of fetal growth deviation by ultrasonic biometry. I. Methodology. <i>Acta Obstetrica et Gynecologica Scandinavica</i> 1982; 61:(1)53-8.	Study population consisted of women with singleton pregnancies only
507	Salihu HM, Aliyu MH, and Kirby RS. In utero nicotine exposure and fetal growth inhibition among twins. <i>American Journal of Perinatology</i> 2005; 22:(8)421-7.	Study not focused on diagnostic accuracy (but on the association between antenatal smoking and fetal growth inhibition)
508	Spong CY, Scherer DM, Ghidini A et al. Midtrimester amniotic fluid tumor necrosis factor-alpha does not predict small-for-gestational-age infants. <i>American Journal of Reproductive Immunology</i> 1997; 37:(3)236-9.	Study did not report diagnostic accuracy data
509	Watson WJ, Valea FA, and Seeds JW. Sonographic evaluation of growth discordance and chorionicity in twin gestation. <i>American Journal of Perinatology</i> 1991; 8:(5)342-4.	Study did not report diagnostic accuracy data
510	Saldana LR, Eads MC, and Schaefer TR. Umbilical blood waveforms in fetal surveillance of twins. <i>American Journal of Obstetrics and Gynecology</i> 1987; 157:(3)712-5.	Study did not report diagnostic accuracy data
511	Barnea ER, Romero R, Scott D et al. The value of biparietal diameter and abdominal perimeter in the diagnosis of growth retardation in twin gestation. <i>American Journal of Perinatology</i> 1985; 2:(3)221-2.	Study did not report diagnostic accuracy data
512	Ishii K, Murakoshi T, Takahashi Y et al. Perinatal outcome of monochorionic twins with selective intrauterine growth restriction and different types of umbilical artery Doppler under expectant management. <i>Fetal Diagnosis and Therapy</i> 2009; 26:(3)157-61.	Study reported on prognosis (not diagnosis)
513	Hata T, Deter RL, and Hill RM. Individual growth curve standards in triplets: Prediction of third-trimester growth and birth characteristics. <i>Obstetrics and Gynecology</i> 1991; 78:(3 I)379-84.	Study did not report diagnostic accuracy data
514	Chang YL, Chang SD, Chao AS et al. Clinical outcome and placental territory ratio of monochorionic twin pregnancies and selective intrauterine growth restriction with different types of umbilical artery Doppler. <i>Prenatal Diagnosis</i> 2009; 29:(3)253-6.	Study did not report diagnostic accuracy data
310	Maiz N, Staboulidou I, Leal AM et al. Ductus venosus Doppler at 11 to 13 weeks of gestation in the prediction of outcome in twin pregnancies. <i>Obstetrics and Gynecology</i> 2009; 113:(4)860-5.	The study did not report diagnostic accuracy data
515	Gaziano EP, Knox GE, Bendel RP et al. Is pulsed Doppler velocimetry useful in the management of multiple-gestation pregnancies? <i>American Journal of Obstetrics and Gynecology</i> 1991; 164:(6 Pt 1)1426-31.	Study did not report diagnostic accuracy

No.	Bibliographic information	Reason for exclusion
516	Chauhan SP, Shields D, Parker D et al. Detecting fetal growth restriction or discordant growth in twin gestations stratified by placental chorionicity. <i>Journal of Reproductive Medicine</i> 2004; 49:(4)279-84.	Study included twins with feto-fetal transfusion syndrome
405	Giles WB. Doppler ultrasound in multiple pregnancies. <i>Bailliere's Clinical Obstetrics and Gynaecology</i> 1998; 12:(1)77-89.	Review article; does not contain original data
517	Kalish RB, Chasen ST, Gupta M et al. First trimester prediction of growth discordance in twin gestations. <i>American Journal of Obstetrics and Gynecology</i> 2003; 189:(3)706-9.	Study used crown–rump length as index test
518	O'Brien WF, Knuppel RA, Scerbo JC et al. Birth weight in twins: an analysis of discordancy and growth retardation. <i>Obstetrics and Gynecology</i> 1986; 67:(4)483-6.	Index test in the study was actual birthweight measurement of babies (not ultrasound biometry)
519	Joern H, Schroeder W, Sassen R et al. Predictive value of a single CTG, ultrasound and Doppler examination to diagnose acute and chronic placental insufficiency in multiple pregnancies. <i>Journal of Perinatal Medicine</i> 1997; 25:(4)325-32.	Study used a poor methodology; ultrasound measurements were not corrected for gestational age
520	Secher NJ, Kaern J, and Hansen PK. Intrauterine growth in twin pregnancies: prediction of fetal growth retardation. <i>Obstetrics and Gynecology</i> 1985; 66:(1)63-8.	Estimated fetal weight was obtained from a formula including abdominal diameter measurement (which is excluded from the protocol)
521	Erkkola R, Ia-Mello S, Piironen O et al. Growth discordancy in twin pregnancies: a risk factor not detected by measurements of biparietal diameter. <i>Obstetrics and Gynecology</i> 1985; 66:(2)203-6.	Study used absolute difference in biparietal diameter as index test (not percentage difference)
522	Blickstein I, Friedman A, Caspi B et al. Ultrasonic prediction of growth discordancy by intertwin difference in abdominal circumference. <i>International Journal of Gynaecology and Obstetrics</i> 1989; 29:(2)121-4.	Study used absolute differences in abdominal circumference as index test (not percentage difference)
523	Brown CE, Guzick DS, Leveno KJ et al. Prediction of discordant twins using ultrasound measurement of biparietal diameter and abdominal perimeter. <i>Obstetrics and Gynecology</i> 1987; 70:(5)677-81.	Study used absolute differences in abdominal circumference and biparietal diameter (not percentage difference) as index tests
524	Banks CL, Nelson SM, and Owen P. First and third trimester ultrasound in the prediction of birthweight discordance in dichorionic twins. <i>European Journal of Obstetrics Gynecology and Reproductive Biology</i> 2008; 138:(1)34-8.	Calculation of estimated fetal weight was based on a formula incorporating only one parameter (abdominal circumference)
525	Henriksen TB, Villadsen GE, Hedegaard M et al. Prediction of light-for-gestational age at delivery in twin pregnancies: an evaluation of fetal weight deviation and growth discordance measured by ultrasound. <i>European Journal of Obstetrics, Gynecology, and Reproductive Biology</i> 1992; 47:(3)195-200.	Study only reported area under the ROC curve and did not report any diagnostic accuracy data
526	<i>Clinics in Laboratory Medicine</i> 2010 30 (3) p15-16 Preface. Prenatal screening and diagnosis Odibo, A. O	Editorial of special edition of <i>Clinics in Laboratory Medicine</i> Journal. Not a research article
527	Cochrane Database of Systematic Reviews 2009 (1) Symphysial fundal height measurement (SFH) in pregnancy for detecting abnormal fetal growth Robert Peter, J.	Protocol of an ongoing Cochrane review
528	<i>Clinics in Laboratory Medicine</i> 2010 30 (3) p643-654	Review article of screening for congenital anomalies in multiple

No.	Bibliographic information	Reason for exclusion
	Screening and testing in multiples Evans, M. I.	pregnancies. Not related to screening for IUGR
392	Cochrane Database of Systematic Reviews 2009 (1) Amniotic fluid index versus single deepest vertical pocket as a screening test for preventing adverse pregnancy outcome Nabhan, A. F.	Population is singleton pregnancies
529	Database of Abstracts of Reviews of Effects 2010 (3) Antenatal ultrasound scanning (Structured abstract) Centre for Reviews and Dissemination.	Structured abstract of a systematic review published in 1994. Original paper reviewed effect of routine ultrasound on perinatal outcome, study population not exclusively twins/triplets
530	Database of Abstracts of Reviews of Effects 2010 (3) Ultrasound screening in pregnancy: a systematic review of the clinical effectiveness, cost-effectiveness and women's views (Structured abstract) Centre for Reviews and Dissemination. Tchirikov, M.	Structured abstract of a systematic review of use of ultrasound for the detection of fetal abnormalities
528	Clinics in Laboratory Medicine 2010 30 (3) p643-654 Screening and testing in multiples Evans, M. I.	Narrative review
531	Twin Research and Human Genetics 2010 13 (4) p389-392 Association between twin discordance at 6-9 weeks' of gestation and birthweight complications Palmer, K.	Not a prediction study
502	American Journal of Obstetrics and Gynecology 2010 #203 (4) p305-315 Twins: Prevalence, problems, and preterm births Chauhan, S. P.	Review article, no new data
532	Seminars In Fetal and Neonatal Medicine 2010 15 (6) p342-348 Selective intrauterine growth restriction in monochorionic twins: pathophysiology, diagnostic approach and management dilemmas Valsky, D. V.	British Library unable to supply
257	Cochrane Database of Systematic Reviews 2010 (5) Fetal and umbilical Doppler ultrasound in high-risk pregnancies Alfirevic, Zarko	Cochrane review regarding fetal assessment in high-risk pregnancies. No diagnostic data on detection of intrauterine growth restriction

Chapter 7 Maternal complications

Hypertension

Review question

What is the optimal screening programme to detect hypertension in multiple pregnancy in the antenatal period?

No.	Bibliographic information	Reason for exclusion
533	AHRQ Research Activities 2002 (261) p18-18 In vitro fertilization doubles the risk of preeclampsia during pregnancy for women expecting more than one child	Short commentary with no original data
534	American Journal of Obstetrics and Gynecology 1998 179 (4) p946-951 Predictors of pre-eclampsia in women at high risk. National Institute of Child Health and Human Development Network of Maternal-Fetal Medicine Units Caritis, S.	The relevant subgroup analysis did not report whether all included multifetal pregnancies were twins and triplets. Higher-order multiple pregnancies may have been included
535	International Journal of Epidemiology 2007 36 (2) p412-419 Risk of early or severe pre-eclampsia related to pre-existing conditions Catov, J. M.	Reports multiple pregnancies as a risk factor for pre-eclampsia. No subgroup analysis for risk factors of pre-eclampsia in twin or triplet pregnancies
536	Database of Abstracts of Reviews of Effects 2010 (1) Accuracy of fibronectin tests for the prediction of pre-eclampsia: a systematic review (Structured abstract) Centre for Reviews and Dissemination.	Structured abstract – full paper ordered
537	Paediatric and Perinatal Epidemiology 2001 15 (1) p40-46 Risk factors for pre-eclampsia/eclampsia among working women in Mexico City Ceron-Mireles, P.	Only includes singletons
538	BJOG: an International Journal of Obstetrics and Gynaecology 2010 117 (6) p695-700 Clinical and geographical variation in prophylactic and therapeutic treatments for pre-eclampsia in the UK Chappell, L. C.	Not a prediction study
539	Chung Hua i Hsueh Tsa Chih - Chinese Medical Journal 2000 63 (12) p869-875 Review of pre-eclampsia in Taiwan: a multi-institutional study Chen, C. L.	Not a prediction study
540	Journal of the American Society of Nephrology 2002 13 (7) p1901-1906 Familial risk of preeclampsia in Newfoundland: a population-based study Dawson, L. M.	Reports multiple pregnancies as a risk factor for pre-eclampsia. No subgroup analysis for risk factors of pre-eclampsia in twin or triplet pregnancies
541	Obstetrics and Gynecology 2005 106 (5 Pt 1) p927-931 The effect of fetal number on the development of hypertensive conditions of pregnancy Day, M. C.	Not a prediction study. Reports incidence of hypertensive disorders by fetal number
542	American Journal of Obstetrics and Gynecology 1996 175 (3 Pt 1) p668-674 Very advanced maternal age: pregnancy after age 45	Only two twin pregnancies in study

No.	Bibliographic information	Reason for exclusion
	Dildy, G. A.	
543	Italian Journal of Gynaecology and Obstetrics 1996 8 (2) p55-58 A laboratory study of the pre-eclampsia syndrome in Yaounde, Cameroon Doh, A. S.	Unclear how many twins or triplets included. No subgroup analysis for twin or triplet pregnancies
544	Journal of Maternal-Fetal and Neonatal Medicine 2006 19 (3) p141-Fetal Preeclampsia in twin gestations: Association with IVF treatments, parity and maternal age Erez, O.	Not a prediction study. Reports results of logistical regression analysis
545	Journal of Obstetrics and Gynaecology Canada: JOGC 2008 30 (10) p918-949 Obstetrical complications associated with abnormal maternal serum markers analytes Gagnon, A.	Not a prediction study. No subgroup analysis for twin or triplet pregnancies
546	Obstetrics and Gynecology 1996 87 (3) p370-4. Atypical presentation of preeclampsia in high-order multifetal gestations Hardardottir, H.	Definition of pre-eclampsia does not meet the international standard
547	Hypertension 2000 36 (2) p149-158 Blood pressure patterns in normal pregnancy, gestational hypertension, and preeclampsia Hermida, R. C.	Only includes singletons
548	American Journal of Hypertension 2003 16 (3) p200-208 Differences in circadian blood pressure variability during gestation between healthy and complicated pregnancies Hermida, R. C.	Only includes singletons
549	Journal of the Society for Gynecologic Investigation 2003 10 (7) p418-422 Reduction of preeclampsia in multiple pregnancies by a dedicated monitoring protocol Hirtenlehner, K.	Not a prediction study
550	American Journal of Perinatology 1997 14 (10) p613-617 Maternal serum uric acid levels in pre-eclamptic women with multiple gestations Hsu,C.D.; Chung,Y.K.; Lee,I.S.; Chou,K.; Copel,J.A.	Not a prediction study
551	Fetal Diagnosis and Therapy 2000 15 (3) p160-164 Correlation of Doppler velocimetry findings in twin pregnancies including course of pregnancy and fetal outcome Joern, H.	Data for IUGR and pre-eclampsia are presented together. Of the 52 cases in the study, 44 were IUGR and eight were pre-eclampsia, but it is not possible to extract data for the two conditions separately. As the majority of the cases were not pre-eclampsia, the findings are probably not relevant to the question
552	BJOG: an International Journal of Obstetrics and Gynaecology	Only includes singletons

No.	Bibliographic information	Reason for exclusion
	2009 116 (2) p268-276 Pulse wave analysis: A preliminary study of a novel technique for the prediction of pre-eclampsia Khalil, A. A.	
553	European Journal of Obstetrics, Gynecology, and Reproductive Biology 2007 133 (1) p12-19 Accuracy of fibronectin tests for the prediction of pre-eclampsia: a systematic review. [48 refs] Leefflang, M. M.	No subgroup analysis for twin or triplet pregnancies
554	Obstetrics and Gynaecology 2010 115 (2) p365-375 Interpreting abnormal proteinuria in pregnancy Lindheimer, M. D.	Review of methods for quantifying proteinuria in singleton pregnancies
555	Archives of Gynecology and Obstetrics 1992 251 (2) p65-68 Is it worth weighing pregnant women in a developing country? de, Muylder, X	Not a prediction study. No subgroup analysis for twin or triplet pregnancies
556	Ultrasound in Obstetrics and Gynecology 2003 22 (2) p160-165 Cross-sectional and longitudinal evaluation of uterine artery Doppler velocimetry for the prediction of pre-eclampsia in normotensive women with specific risk factors Parretti, E.	Only includes singletons
557	Ultrasound in Obstetrics and Gynecology 2008 32 (2) p138-146 Uterine artery Doppler at 11 + 0 to 13 + 6 weeks and 21 + 0 to 24 + 6 weeks in the prediction of pre-eclampsia Plasencia, W.	Only includes singletons
558	Obstetrics and Gynecology 1993 82 (6) p978-83 Uterine artery Doppler velocity waveforms in twin pregnancies Rizzo, G.	High prevalence of gestational hypertension and pre-eclampsia, half of the study population were taking antihypertensive medication at study entry. Not typical of the general population
559	Archives of Gynecology and Obstetrics 2002 267 (2) p72-75 Maternal plasma adenosine and endothelin-1 levels in twin gestation complicated by preeclampsia Shinagawa, T.	Test performed at a very late gestational age – not a prediction study
560	Archives of Gynecology 1984 236 (1) p41-45 Serum levels of placenta-specific tissue protein 12 (PP12) in pregnancies complicated by pre-eclampsia, diabetes or twins Than, G. N.	Looked at pregnancies with pre-eclampsia or twins, not both
561	British Journal of Obstetrics and Gynaecology 1999 106 (6) p570-575 Twin mothers, pregnancy hypertension and pre-eclampsia Thornton, J. G.	Unclear how many twins or triplets included. No subgroup analysis for twin or triplet pregnancies
562	American Journal of Obstetrics and Gynecology 2001 184 (3) p374-381 An Australian twin study of the genetic basis of preeclampsia and eclampsia Treloar, S. A.	Looks at the correlation of hypertension in adult twins who are pregnant. Unclear how many twins or triplet fetuses included in the pregnancies. No subgroup analysis for twin or triplet

No.	Bibliographic information	Reason for exclusion
		pregnancies
563	Journal of Medical Sciences 2008 8 (8) p722-727 Serum B-hCG levels in a diagnosis and management of preeclampsia Yousefnejad, K.	Only includes singletons
564	Journal of Hypertension vol 27 (10) p2044 to 2050 2009 Maternal EDN1 G5665T polymorphism influences circulating endothelin-1 levels and plays a role in determination of preeclampsia phenotype. Aggarwal PK, Jain V, Srinivasan R et al.	Twin and triplet pregnancies were excluded
565	Cochrane Database of Systematic Reviews 2010 (6) Magnesium sulphate versus lytic cocktail for eclampsia Duley, L.	Not a predictive study
566	Hypertension in Pregnancy 29 p330-341 (2010) Soluble endoglin for the prediction of preeclampsia in a high risk cohort Maynard SE, Moore Simas TA, Bur L et al.	Not a prediction study – compared soluble endoglin levels in women with preeclampsia and those without
567	Acta Clinica Belgica vol 65 (2) p85 to 90 (2010) Clinical and ultrasound work-up and follow-up of preeclampsia Richter J, van Mieghem T and Devlieger R.	Narrative review
568	Obstet Gynecol Clin N Am 37 (2010) p239-253 Abnormal placentation, angiogenic factors, and the pathogenesis of preeclampsia Silasi M, Cohen B, Karumanchi SA et al.	Narrative review
569	American Journal of Obstetrics and Gynecology 2010 203 (4) p381-384 Protein:creatinine ratio in uncomplicated twin pregnancy Smith, N. A.	This study compares protein:creatinine ratio in uncomplicated twin pregnancies to that in uncomplicated singleton pregnancies. No data on predictive accuracy of protein:creatinine ratio for hypertension in multiple pregnancy

Chapter 8 Preterm birth

Predicting the risk of preterm birth

Review question

What is the optimal screening programme to predict the risks of spontaneous preterm delivery?

No.	Bibliographic information	Reason for exclusion
478	Beckmann CA, Beckmann CR, Stanziano GJ et al. Accuracy of maternal perception of preterm uterine activity. <i>American Journal of Obstetrics and Gynecology</i> 1996; 174:(2)672-5.	The study did not predict the risk of spontaneous preterm delivery
479	Berghella V, Baxter JK, and Hendrix NW. Cervical assessment by ultrasound for preventing preterm delivery. <i>Cochrane Database of Systematic Reviews</i> 2009;(4).	Review of studies that included women in labour who could not be distinguished in the study
480	Ebell M. What is the best way to monitor women at risk for preterm labor? <i>Evidence-Based Practice</i> 1998; 1:(4)5-6, insert	Not obtainable from the British Library
481	Ekwo EE, Gosselink CA, and Moawad A. Previous pregnancy outcomes and subsequent risk of preterm rupture of amniotic sac membranes. <i>British Journal of Obstetrics and Gynaecology</i> 1993; 100:(6)536-41.	Study population included singleton pregnancies with no separate reporting for twin and/or triplet pregnancies
482	Bloom SLYNP, McIntire DD, and Leveno KJ. Recurrence of preterm birth in singleton and twin pregnancies. <i>Obstetrics and Gynecology</i> 2001; 98:(3)379-85.	Study did not report separate results for twins
483	Hiilesmaa V and Taipale P. Ultrasonography of the uterine cervix and preterm delivery. <i>Fetal and Maternal Medicine Review</i> 1999; 11:(1)7-16.	Narrative review article with no new data
484	Iams JD, Goldsmith LT, and Weiss G. The preterm prediction study: maternal serum relaxin, sonographic cervical length, and spontaneous preterm birth in twins. <i>Journal of the Society for Gynecologic Investigation</i> 2001; 8:(1)39-42.	Study mainly investigating maternal serum relaxin as a predictor of preterm labour
485	Klein K, Gregor H, Hirtenlehner-Ferber K et al. Prediction of spontaneous preterm delivery in twin pregnancies by cervical length at mid-gestation. <i>Twin Research and Human Genetics: the Official Journal of the International Society for Twin Studies</i> 2008; 11:(5)552-7.	The study is already included through inclusion of a systematic review ⁴⁸⁶
487	Morrison JC, Chauhan SP, Magann EF et al. Excessive uterine contractions: effect on the incidence of preterm delivery in twin gestation. <i>Journal of Reproductive Medicine</i> 2005; 50:(12)923-7	Study included symptomatic women (experiencing an episode of preterm labour), no separate results for asymptomatic non-labouring women
474	O'Connor MC, Arias E, Royston JP et al. The merits of special antenatal care for twin pregnancies. <i>British Journal of Obstetrics and Gynaecology</i> 1981; 88:(3)222-30.	Study included women in labour
488	Papiernik E. Prediction of the preterm baby. <i>Clinics in Obstetrics and Gynaecology</i> 1984; 11:(2)315-36.	Narrative review of articles, not a systematic review
489	Paternoster DM, De Paoli M, Plebani M et al. Risk factors and predictors of preterm delivery. <i>Prenatal and Neonatal Medicine</i> 1999; 4:(4)308-11.	Study did not include twin/triplet pregnancies
490	Reichmann JP. Home uterine activity monitoring: an evidence review of its utility in multiple gestations. <i>Journal of Reproductive Medicine</i> 2009; 54:(9)559-62.	Narrative review of articles, not a systematic review
491	Roman AS, Rebarber A, Sfakianaki AK et al. Vaginal fetal fibronectin as a predictor of spontaneous preterm	Study included women who were already at risk of preterm labour (not

Multiple pregnancy (appendices)

No.	Bibliographic information	Reason for exclusion
	delivery in the patient with cervical cerclage. American Journal of Obstetrics and Gynecology 2003; 189:(5)1368-73.	asymptomatic)
492	Soriano D, Weisz B, Seidman DS et al. The role of sonographic assessment of cervical length in the prediction of preterm birth in primigravidae with twin gestation conceived after infertility treatment. Acta Obstetrica et Gynecologica Scandinavica 2002; 81:(1)39-43.	The study is already included through inclusion of a systematic review ⁴⁸⁶
493	Sullivan SA and Newman R. Prediction and prevention of preterm delivery in multiple gestations. Clinical Obstetrics & Gynecology 2004; 47:(1)203-15.	A narrative review of articles
494	Tolino A, Ronsini S, Zullo F et al. Fetal fibronectin as a screening test for premature delivery in multiple pregnancies. International Journal of Gynaecology and Obstetrics 1996; 52:(1)3-7.	The study did not report data for twin or triplet pregnancies
495	Tsikouras P, Galazios G, Zalvanos A et al. Transvaginal sonographic assessment of the cervix and preterm labor. Clinical and Experimental Obstetrics and Gynecology 2007; 34:(3)159-62.	The study did not include multiple pregnancy
496	Yang JH, Kuhlman K, Daly S et al. Prediction of preterm birth by second trimester cervical sonography in twin pregnancies. Ultrasound in Obstetrics and Gynecology 2000; 15:(4)288-91.	The study is already included through inclusion of a systematic review ⁴⁸⁶
497	Adeyemi O. The role of phosphorylated insulin-like growth factor binding protein-1 in predicting pre-term labour in twin pregnancies. Journal of Obstetrics and Gynaecology 2010 30 (6) p571-573	Not a predictive test outlined in the review protocol
498	Yoshizato T. Longitudinal changes in canal length at 16-35 weeks in normal twin pregnancies and twin pregnancies with preterm labor and delivery. Journal of Obstetrics and Gynaecology Research 2010 36 (4) p733-738	Not a predictive test outlined in the review protocol
499	Honest H, Bachmann LM, Coomarasamy A et al. Accuracy of cervical transvaginal sonography in predicting preterm birth: a systematic review. Ultrasound in Obstetrics and Gynecology 2003; 22:(3)305-22.	There is a more up to date systematic review available that contains many of the same studies. This systematic review does not report enough data to allow sensitivity and specificity to be calculated, and it does not report which studies were included in each meta-analysis or the number of women in each analysis
500	Sperling L, Kiil C, Larsen LU et al. How to identify twins at low risk of spontaneous preterm delivery. Ultrasound in Obstetrics and Gynecology 2005; 26:(2)138-44.	The study is already included through inclusion of a systematic review ⁴⁸⁶
501	Meekai S.To, Eduardo BF, Francisca S.Molina et al. Maternal characteristics and cervical length in the prediction of spontaneous early preterm delivery in twins. American Journal of Obstetrics and Gynecology 2006; 194:(5)1360-5.	The study is already included through inclusion of a systematic review ⁴⁸⁶
502	American Journal of Obstetrics and Gynecology 2010 #203 (4) p305-315 Twins: Prevalence, problems, and preterm births Chauhan, S. P.	Review article, no new data

No.	Bibliographic information	Reason for exclusion
503	Cochrane Database of Systematic Reviews 2010 (6) Risk scoring systems for predicting preterm birth with the aim of reducing associated adverse outcomes Davey, MaryAnn	Protocol of a Cochrane review
504	American Journal of Obstetrics and Gynecology 2010 202 (2) p155-4 Prediction of spontaneous preterm birth in asymptomatic twin pregnancies using the change in cervical length over time Fox, N. S.	Study focuses on change in cervical length which was not specified as a relevant index test in the review protocol

Preventing preterm birth

Review question

What interventions are effective in preventing spontaneous preterm delivery in multiple pregnancy, including bed rest, progesterone and cervical cerclage?

No.	Bibliographic information	Reason for exclusion
570	Katz M, Robertson PA, and Creasy RK. Cardiovascular complications associated with terbutaline treatment for preterm labor. <i>American Journal of Obstetrics and Gynecology</i> 1981; 139:(5)605-8.	Study did not focus on the prevention of preterm delivery (but on cardiovascular side effects associated with terbutaline use)
571	Nassar AH, Sakhel K, Maarouf H et al. Adverse maternal and neonatal outcome of prolonged course of magnesium sulfate tocolysis. <i>Acta Obstetrica et Gynecologica Scandinavica</i> 2006; 85:(9)1099-103.	Study included women in labour
572	van Dijk KG, Dekker GA, and Van Geijn HP. Ritodrine and nifedipine as tocolytic agents: a preliminary comparison. <i>Journal of Perinatal Medicine</i> 1995; 23:(5)409-15.	Study included women in labour
573	Plank K, Mikulaj V, Stencl J et al. Prevention and treatment of prematurity in twin gestation. <i>Journal of Perinatal Medicine</i> 1993; 21:(4)309-13.	Study did not have a comparative control group
574	de HR, Mol BW, Erwich JJ et al. Adverse drug reactions to tocolytic treatment for preterm labour: prospective cohort study.[see comment]. <i>British Medical Journal</i> 2009; 338:b744.	Study included women in labour
575	King JF, Flenady V, Papatsonis D et al. Calcium channel blockers for inhibiting preterm labour. <i>Cochrane Database of Systematic Reviews</i> 2009;(4).	Study did not report results specifically for twin and/or triplet pregnancies
576	de la TL, Istwan NB, Desch C et al. Management of recurrent preterm labor in twin gestations with nifedipine tocolysis. <i>American Journal of Perinatology</i> 2008; 25:(9)555-60.	Study included women in labour
577	Lam F, Bergauer NK, Jacques D et al. Clinical and cost-effectiveness of continuous subcutaneous terbutaline versus oral tocolytics for treatment of recurrent preterm labor in twin gestations. <i>Journal of Perinatology</i> 2001; 21:(7)444-50.	Study included women in labour
578	Kosasa TS, Nakayama RT, Hale RW et al. Ritodrine and terbutaline compared for the treatment of preterm labor. <i>Acta Obstetrica et Gynecologica Scandinavica</i> 1985; 64:(5)421-6.	Study did not report results specifically for twin and/or triplet pregnancies
579	Kupferminc M, Lessing JB, Yaron Y et al. Nifedipine versus ritodrine for suppression of preterm labour. <i>British Journal of Obstetrics and Gynaecology</i> 1993; 100:(12)1090-4.	Study included women in labour
580	Centre for Reviews and Dissemination. Nifedipine versus ritodrine for suppression of preterm labor: a meta-analysis (Structured abstract). <i>Database of Abstracts of Reviews of Effects</i> 2009;(4).	Study is a structured abstract from a systematic review that has been excluded ⁵⁷⁹
581	Pittrof R. The effects of hospitalization for rest on fetal growth, neonatal morbidity and length of gestation in twin pregnancy. <i>British Journal of Obstetrics and Gynaecology</i> 1991; 98:(4)416-7.	Letter to the editor
582	Progesterone does not appear to prevent twin preterm birth. <i>Contemporary Ob/Gyn</i> 2009; 54:(7)16.	Short report of study that has already been included
583	Dudenhausen JW. Tocolysis in the management of multiple pregnancy. <i>BJOG: an International Journal of Obstetrics and Gynaecology</i> 2003; 110:(SUPPL.:#20)107.	Brief narrative review

493	Sullivan SA and Newman R. Prediction and prevention of preterm delivery in multiple gestations. <i>Clinical Obstetrics & Gynecology</i> 2004; 47:(1)203-15.	Narrative review
584	Lim AC, Bloemenkamp KW, Boer K et al. Progesterone for the prevention of preterm birth in women with multiple pregnancies: the AMPHIA trial. <i>BMC Pregnancy and Childbirth</i> 2007; 7:7.	Protocol of a planned randomised trial only
585	Moutquin JM, Sherman D, Cohen H et al. Double-blind, randomized, controlled trial of atosiban and ritodrine in the treatment of preterm labor: a multicenter effectiveness and safety study. <i>American Journal of Obstetrics and Gynecology</i> 2000; 182:(5)1191-9.	Study included women in labour
586	Scott-Findlay S. Days of waiting. Bedrest with a twin pregnancy. <i>AWHONN Lifelines</i> 2004; 8:(5)480-9.	Study describes a single patient's experience
587	Endl J and Baumgarten K. Results of oral prophylactic longterm tocolysis and cerclage in management of twin pregnancies (Multicenter study). <i>Zeitschrift fur Geburtshilfe und Perinatologie</i> 1982; Vol.186, pp.319-325, 1982.:325.	Study is not reported in the English language
588	Doyle LW. Antenatal progesterone to prevent preterm birth. <i>The Lancet</i> 2009; 373:(9680)-2002.	Study did not report results specifically for twin and/or triplet pregnancies
589	Swaby C. Pilot randomized controlled trial of vaginal progesterone to prevent preterm birth in multiple pregnancy. <i>JOGC: Journal of Obstetrics and Gynaecology Canada</i> 2007; 29:(6 Suppl 1)S47, 2007.	Study is an update on an ongoing pilot trial
590	Sureau C and Breart G. The prevention of premature birth. <i>Annales Nestle</i> 1989; 47:(2)89-96.	Study is a narrative review of women in labour
591	Progesterone treatment does not reduce early preterm birth in twin pregnancy. <i>Nurse Prescribing</i> 2009; 7:(7)330-1.	Brief report of study that has already been included
592	Crowther CA. Prevention of preterm birth in multiple pregnancy. <i>Baillieres Clinical Obstetrics and Gynaecology</i> 1998; 12:(1)67-75.	Study included women in labour
593	Gummerus M and Halonen O. [The value of bed rest and beta-sympathomimetic treatment in multiple pregnancies]. <i>Duodecim; laaketieteellinen aikakauskirja</i> 1985; 101:(20)1966-71.	Study is not in English language
594	You be the judge. Should steroids, tocolytics have been given to stop premature birth of twins? <i>Ob-Gyn Malpractice Prevention</i> 1999; 6:(8)61.	Case report
595	Tita ATN and Rouse DJ. Progesterone for preterm birth prevention: an evolving intervention. <i>American Journal of Obstetrics and Gynecology</i> 2009; #200:(3)219-24.	Study included women in labour
596	Dodd JM, Flenady VJ, Cincotta R et al. Progesterone for the prevention of preterm birth: A systematic review. <i>Obstetrics and Gynecology</i> 2008; 112:(1)127-34.	Study included women in labour
597	Dodd JM, Flenady V, Cincotta R et al. Prenatal administration of progesterone for preventing preterm birth in women considered to be at risk of preterm birth. <i>Cochrane Database of Systematic Reviews</i> 2009;(4).	Study included women in labour
598	Pincus R. Salbutamol infusion for premature labour--the Australian trials experience. <i>Australian and New Zealand Journal of Obstetrics and Gynaecology</i> 1981; 21:(1)1-4.	Study included women in labour
599	Cetrulo CL and Freeman RK. Ritodrine HCL for the prevention of premature labor in twin pregnancies. <i>Acta Geneticae Medicae et Gemellologiae</i> 1976; 25:321-4.	Brief report on an ongoing trial

Multiple pregnancy (appendices)

600	Cetrulo CL and Freeman RK. Ritodrine HCL for the prevention of premature labor in twin pregnancies. <i>Acta Geneticae Medicae et Gemellologiae</i> 1976; 25:321-4.	Study included women who had had an episode of preterm labour
601	Crowther CA. Selected Cochrane systematic reviews. Bed rest in hospital for multiple pregnancy. <i>Birth: Issues in Perinatal Care</i> 1999; 26:(3)201-2.	Summary of a Cochrane review by the same author which is already included for this question
602	Maloni JA, Margevicius SP, and Damato EG. Multiple gestation: side effects of antepartum bed rest. <i>Biological Research for Nursing</i> 2006; 8:(2)115-28.	Study did not include a control group
472	Hartikainen-Sorri AL. Is routine hospitalization in twin pregnancy necessary? A follow-up study. <i>Acta Geneticae Medicae et Gemellologiae</i> 1985; 34:(3-4)189-92.	Study did not include a control group
603	Dodd JM and Crowther CA. Hospitalisation for bed rest for women with a triplet pregnancy: an abandoned randomised controlled trial and meta-analysis. <i>BMC Pregnancy and Childbirth</i> 2005; 5:(1)8, 2005.	Report of an abandoned trial that failed to recruit participants (recruited only seven participants in seven years, 1996-2003)
604	Jorgensen AL, Alfirevic Z, Tudur S et al. Cervical stitch (cerclage) for preventing pregnancy loss: Individual patient data meta-analysis. <i>BJOG: an International Journal of Obstetrics and Gynaecology</i> 2007; 114:(12)1460-76.	Study population consisted of women with cervical incompetence
605	Odibo AO, Elkousy M, Ural SH et al. Prevention of preterm birth by cervical cerclage compared with expectant management: A systematic review. <i>Obstetrical and Gynecological Survey</i> 2003; 58:(2)130-6.	Study population consisted of women with cervical incompetence
606	Vergani P, Ghidini A, Bozzo G et al. Prenatal management of twin gestation. Experience with a new protocol. <i>Journal of Reproductive Medicine</i> 1991; 36:(9)667-71.	Study evaluated a protocol for twin pregnancies in which women (with twin pregnancies) were referred to special twin clinic and which stressed the importance of early recognition of uterine contractile activity and work leave from 28 weeks' gestation
607	Allbert JR, Wise CA, Lou CH et al. Subcutaneous tocolytic infusion therapy for patients at very high risk for preterm birth. <i>Journal of Perinatology</i> 1992; 12:(1)28-31.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶⁰⁸
609	O'Leary JA. Prophylactic tocolysis of twins. <i>American Journal of Obstetrics and Gynecology</i> 1986; 154:(4)904-5.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶⁰⁸
610	Raja RL. Prevention of preterm delivery in twins. A neurohormonal approach. <i>Progress in Clinical and Biological Research</i> 1978; 24 Pt C:117-21.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶⁰⁸
611	Tambyraja RL, Aputharajah V, and Salmon Y. Prevention of prematurity in twins. <i>Australian and New Zealand Journal of Obstetrics and Gynaecology</i> 1978; 18:(3)179-81.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶⁰⁸
612	Nakamura Y, Sada I, Tomiura K et al. Management of twin pregnancy--for the prevention of preterm delivery. <i>Nippon Sanka Fujinka Gakkai Zasshi - Acta Obstetrica et Gynaecologica Japonica</i> 1983; 35:(3)335-8.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
614	Jeffrey RL, Bowes WA, Jr., and Delaney JJ. Role of bed rest in twin gestation. <i>Obstetrics and Gynecology</i> 1974; 43:(6)822-6.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
615	DUNN B. Bed rest in twin pregnancy. <i>Journal of Obstetrics and Gynaecology of the British Empire</i> 1961; 68:685-7.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³

616	JONAS EG. The value of prenatal bed-rest in multiple pregnancy. <i>Journal of Obstetrics and Gynaecology of the British Empire</i> 1963; 70:461-4.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
617	Komaromy B and Lampe L. The value of bed rest in twin pregnancies. <i>International Journal of Gynaecology and Obstetrics</i> 1977; 15:(3)262-6.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
618	Pulkkinen MO and Gronroos M. Bed rest did not prevent prematurity in twins because the etiology lies in the stretch and poor progesteronegenesis. <i>Acta Obstetricia et Gynecologica Scandinavica</i> 1979; 58:(6)569-70.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
619	Laursen B. Twin pregnancy. The value of prophylactic rest in bed and the risk involved. <i>Acta Obstetricia et Gynecologica Scandinavica</i> 1973; 52:(4)367-71.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
620	van der Pol JG, Bleker OP, and Treffers PE. Clinical bedrest in twin pregnancies. <i>European Journal of Obstetrics, Gynecology, and Reproductive Biology</i> 1982; 14:(2)75-80.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
476	Skrablin S, Kuvacic I, Jukic P et al. Hospitalization vs. outpatient care in the management of triplet gestations. <i>International Journal of Gynaecology and Obstetrics</i> 2002; 77:(3)223-9.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶¹³
621	Eskandar M, Shafiq H, Almushait MA et al. Cervical cerclage for prevention of preterm birth in women with twin pregnancy. <i>International Journal of Gynaecology and Obstetrics</i> 2007; 99:(2)110-2.	Study addresses the review question but sufficient evidence was available from a higher quality study ⁶²²
623	Weekes AR, MENZIES DN, and de Boer CH. The relative efficacy of bed rest, cervical suture, and no treatment in the management of twin pregnancy. <i>British Journal of Obstetrics and Gynaecology</i> 1977; 84:(3)161-4.	Study addresses the review question but sufficient evidence was available from a higher quality studies ^{613, 622}
624	Marivate M, de Villiers KQ, and Fairbrother P. Effect of prophylactic outpatient administration of fenoterol on the time of onset of spontaneous labor and fetal growth rate in twin pregnancy. <i>American Journal of Obstetrics and Gynecology</i> 1977; 128:(7)707-8.	Study is already included through inclusion of a Cochrane review ⁶⁰⁸
625	Skjaeris J and Aberg A. Prevention of prematurity in twin pregnancy by orally administered terbutaline. <i>Acta Obstetricia et Gynecologica Scandinavica - Supplement</i> 1982; 108:39-40.	Study is already included through inclusion of a Cochrane review ⁶⁰⁸
626	O'Connor MC, Murphy H, and Dalrymple IJ. Double blind trial of ritodrine and placebo in twin pregnancy. <i>British Journal of Obstetrics and Gynaecology</i> 1979; 86:(9)706-9.	Study is already included through inclusion of a Cochrane review ⁶⁰⁸
627	Ashworth MF, Spooner SF, Verkuyl DA et al. Failure to prevent preterm labour and delivery in twin pregnancy using prophylactic oral salbutamol. <i>British Journal of Obstetrics and Gynaecology</i> 1990; 97:(10)878-82.	Study is already included through inclusion of a Cochrane review ⁶⁰⁸
628	Crowther CA, Verkuyl DA, Ashworth MF et al. The effects of hospitalization for bed rest on duration of gestation, fetal growth and neonatal morbidity in triplet pregnancy. <i>Acta Geneticae Medicae et Gemellologiae</i> 1991; 40:(1)63-8.	Study is already included through inclusion of a Cochrane review ⁶¹³
629	Crowther CA, Neilson JP, Verkuyl DA et al. Preterm labour in twin pregnancies: can it be prevented by hospital admission? <i>British Journal of Obstetrics and Gynaecology</i> 1989; 96:(7)850-3.	Study is already included through inclusion of a Cochrane review ⁶¹³

Multiple pregnancy (appendices)

471	Hartikainen-Sorri AL and Jouppila P. Is routine hospitalization needed in antenatal care of twin pregnancy? Journal of Perinatal Medicine 1984; 12:(1)31-4.	Study is already included through inclusion of a Cochrane review ⁶¹³
630	Saunders MC, Dick JS, Brown IM et al. The effects of hospital admission for bed rest on the duration of twin pregnancy: a randomised trial. Lancet 1985; 2:(8459)793-5.	Study is already included through inclusion of a Cochrane review ⁶¹³
631	Cerclage in multiple gestations with short cervix. ACOG Clinical Review 2006; 11:(2)2.	Article not obtainable from the British Library
632	Sciscione, AC. Maternal activity restriction and the prevention of preterm birth American Journal of Obstetrics and Gynecology 2010 202 (3) p232-235	Narrative review
633	Norman JE, MacKenzie F, Owen P et al. Progesterone for the prevention of preterm birth in twin pregnancy (STOPPIT): a randomised, double-blind, placebo-controlled study and meta-analysis. Obstetrical and Gynaecological Survey p646-648	Editorial
634	Buchanan SL. Planned early birth versus expectant management for women with preterm prelabour rupture of membranes prior to 37 weeks' gestation for improving pregnancy outcome. Cochrane Database of Systematic Reviews 2010 (3)	Does not report the number of twin and triplet pregnancies included (if any). No subgroup analysis for twin and triplet pregnancies
635	Berghella V, Baxter JK and Hendrix NW. Cervical assessment by ultrasound for preventing preterm delivery. Obstetrics and Gynaecology vol 114 (5) 2009 p1140-1141	An abstract of a Cochrane Review that is not a prevention method outlined in the protocol
636	Cochrane Database of Systematic Reviews 2009 (1) Cervical assessment by ultrasound for preventing preterm delivery Berghella, Vincenzo	Cochrane review, with only one included study reporting data on multiple pregnancies. Prevention method is cervical assessment which was not specified as a relevant intervention in the review protocol

Untargeted corticosteroids

Review question

Is routine/elective antenatal corticosteroid prophylaxis effective in reducing perinatal morbidity, including neonatal respiratory distress syndrome, necrotising colitis and intraventricular haemorrhage, in multiple pregnancy?

No.	Bibliographic information	Reason for exclusion
637	Abbasi S, Hirsch D, Davis J, Tolosa J, Stouffer N, Debbs R et al. Effect of single versus multiple courses of antenatal corticosteroids on maternal and neonatal outcome. <i>American Journal of Obstetrics and Gynecology</i> . Vol 182 p1243-1249 (2000)	Data for multiple pregnancy not provided
638	Battista L, Winovitch KC, Rumney PJ, Davis E, Hagemann C, Wing DA. A case-control comparison of the effectiveness of betamethasone to prevent neonatal morbidity and mortality in preterm twin and singleton pregnancies. <i>American Journal of Perinatology</i> . Vol 25 p449-453 (2008)	Study population comprised a mixture of twin and singleton pregnancies which could not be distinguished
639	Blickstein I, Reichman B, Lusk A, Shinwell ES, Israel NN. Plurality-dependent risk of severe intraventricular hemorrhage among very low birth weight infants and antepartum corticosteroid treatment. <i>American Journal of Obstetrics and Gynecology</i> . Vol 194 p1329-1333 (2006)	Study not explicitly restricted to routine use of corticosteroids in multiple pregnancies (may have included women in labour)
640	Bloom SL, Leveno KJ. Corticosteroid use in special circumstances: preterm ruptured membranes, hypertension, fetal growth restriction, multiple fetuses. <i>Clinical Obstetrics & Gynecology</i> . 46 p150-160 (2003)	Study is an evidence-based consensus statement; lacks data relevant to multiple pregnancy
641	Choi SJ, Song SE, Seo ES, Oh SY, Kim JH, Roh CR. The effect of single or multiple courses of antenatal corticosteroid therapy on neonatal respiratory distress syndrome in singleton versus twin pregnancies. <i>Australian and New Zealand Journal of Obstetrics and Gynaecology</i> . Vol 49 p173-179 (2009)	Study included women in labour
642	Dirnberger DR, Yoder BA, Gordon MC. Single versus repeated-course antenatal corticosteroids: outcomes in singleton and multiple-gestation pregnancies. <i>American Journal of Perinatology</i> 2001; 18(5):267.	Study did not give any indication of what constituted multiple pregnancy – may have included quadruplet pregnancies; may also have included women in labour
643	Quist-Therson EC, Myhr TL, Ohlsson A. Antenatal steroids to prevent respiratory distress syndrome: multiple gestation as an effect modifier. <i>Acta Obstetrica et Gynecologica Scandinavica</i> . Vol 78 p388-392 (1999)	Study included women in labour
644	Roberts D, Dalziel SR. Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth. <i>Cochrane Database of Systematic Reviews</i> 2009;(4).	Study included women in labour
645	Smrcek JM, Schwartau N, Kohl M, Berg C, Geipel A, Krapp M et al. Antenatal corticosteroid therapy in premature infants. <i>Archives of Gynecology and Obstetrics</i> . Vol 271 p26-32 (2005)	Study population comprised a mixture of singleton and multiple pregnancies; may have included women in labour
646	Hashimoto LN, Hornung RW, Lindsell CJ, Brewer DE, Donovan EF. Effects of antenatal glucocorticoids on outcomes of very low birth weight multifetal gestations.[see comment]. <i>American Journal of Obstetrics and Gynecology</i> . Vol 187 p804-810 (2002)	Study included quadruplet pregnancies with no separate outcomes reported for twin and/or triplet pregnancies
647	Turrentine MA, Wilson PD, Wilkins IA. A retrospective analysis of the effect of antenatal steroid administration on the incidence of respiratory distress syndrome in	Study not explicitly restricted to routine use of corticosteroids in multiple pregnancies (may have

No.	Bibliographic information	Reason for exclusion
	preterm twin pregnancies. <i>Am J Perinatol</i> . Vol 13 p351-354 (1996)	included women in labour)
648	Liggins GC, Howie RN. A controlled trial of antepartum glucocorticoid treatment for prevention of the respiratory distress syndrome in premature infants. <i>Pediatrics</i> . Vol 50 p515–25 (1972)	Study included women in labour
649	Collaborative Group on Antenatal Steroid Therapy. Effect of antenatal dexamethasone administration on the prevention of respiratory distress syndrome. <i>American Journal of Obstetrics and Gynecology</i> . Vol 141 p276–87 (1981)	Study included women in labour
650	Silver RK, Vyskocil CR, Solomon SL, Ragin A, Neerhof MG, Farrel EE. Randomized trial of antenatal dexamethasone in surfactant treated infants delivered prior to 30 weeks of gestation. <i>Obstetrics & Gynecology</i> . Vol 87 p683–91 (1996)	Study included quadruplet pregnancies with no separate outcomes reported for twin and/or triplet pregnancies; also included women in labour
651	Gamsu HR, Mullinger BM, Donnai P, Dash CH. Antenatal administration of betamethasone to prevent respiratory distress syndrome in preterm infants: report of a UK multicentre trial. <i>British Journal of Obstetrics and Gynaecology</i> . Vol 96 p401–10 (1989)	Study included women in labour
652	Holmes R, Wardle P, Tuohy J. Antenatal steroid administration to twin pregnancies. <i>Contemporary Reviews in Obstetrics and Gynaecology</i> 1996; 8(4):181-184.	Study did not evaluate the effects of antenatal corticosteroids on fetal/maternal morbidity or mortality
653	Neilson JP, Crowther CA. Preterm labour in multiple pregnancies. <i>Fetal and Maternal Medicine Review</i> 1993; 5(2):105-119.	Study did not focus on the use of corticosteroids in multiple pregnancy
654	Papiernik E, Keith L, Oleszczuk JJ, Cervantes A. What interventions are useful in reducing the rate of preterm delivery in twins? <i>Clinical Obstetrics and Gynecology</i> 1998; 41(1):13-23.	Study did not focus on the use of corticosteroids in multiple pregnancy
655	Burkett G, Bauer CR, Morrison JC, Curet LB. Effects of prenatal dexamethasone administration on prevention of respiratory distress syndrome in twin pregnancies. <i>Journal of Perinatology</i> 1986; 6(4):304-308.	Study reanalysed data from a study that included women in labour ⁶⁴⁹
656	Crowther CA and Harding JE. Repeat doses of prenatal corticosteroids for women at risk of preterm birth for preventing neonatal respiratory disease. <i>Cochrane Database of Systematic Reviews</i> 2007;(3)CD003935.	Study did not report data specifically for twin or triplet pregnancies

Chapter 9 Indications for referral to a tertiary level fetal medicine centre

Review question

What are the clinical indications for referral to subspecialist services?

No.	Bibliographic information	Reason for exclusion
677	American Journal of Obstetrics and Gynecology 9-1-1985 153 (1) p7-13 Alloimmunization in twin pregnancies Bowman, J. M.	Alloimmunisation – not a population of interest
678	BJOG: an International Journal of Obstetrics and Gynaecology 2009 116 (6) p804-812 Transfusional fetal complications after single intrauterine death in monochorionic multiple pregnancy are reduced but not prevented by vascular occlusion O'Donoghue, K.	This paper estimates the incidence of cotwin death and brain injury after therapeutic fetal reduction in monochorionic multiple pregnancy for treatment of fetofetal transfusion syndrome, TRAP or congenital anomalies and compares it with spontaneous single intrauterine death. Not relevant to the review question on indications for referral
679	Chinese Medical Journal 2010 123 (5) p549-554 Fetal reduction by bipolar cord coagulation in managing complicated monochorionic multiple pregnancies: preliminary experience in China He, Z. M.	Case series of fetal reduction by bipolar cord coagulation in complicated monochorionic pregnancies
634	Cochrane Database of Systematic Reviews 2010 (3) Planned early birth versus expectant management for women with preterm prelabour rupture of membranes prior to 37 weeks' gestation for improving pregnancy outcome Buchanan, S. L.	Systematic review of preterm prelabour rupture of membranes which is not a population of interest. Only two twin pregnancies were included
680	Fertility and Sterility 1999 71 (2) p380-384 Multifetal pregnancy reduction: modification of the technique and analysis of the outcome Mansour, R. T.	Fetal reduction of healthy fetuses. Does not report on referral for any complications
681	Fertility and Sterility 1995 64 (6) p1201-1203 Multifetal reduction of high-order multiple pregnancy: comparison of obstetrical outcome with nonreduced twin gestations Alexander, J. M.	Does not specify whether any of the pregnancies have single fetal death, discordant fetal anomaly or discordant fetal growth
682	Fertility and Sterility 1993 60 (3) p504-509 Embryo reduction in triplet pregnancies after assisted procreation: a comparative study Bollen, N.	A case series with no comparison group
683	Fetal Diagnosis and Therapy 2003 18 (2) p132-136 Multifetal pregnancies: Evolution of methods of initiation and impact of REI certification for patients seeking reduction Calhoun, B.	A case series of multifetal pregnancy reduction. Not a relevant population
684	Hong Kong Medical Journal 2000 6 (3) p293-300 Single foetal death in twin pregnancies: review of the	A clinical audit supplemented by nonsystematic review of literature

No.	Bibliographic information	Reason for exclusion
	maternal and neonatal outcomes and management Woo, H. H.	
685	Journal of Maternal-Fetal Investigation 1993 2 (5) p254-Fetal Modifiable determinants of birth weight variability in twins Eller, D. P.	A cross-sectional study examining association between various variables and birthweight of twins. Not related to referral to subspecialist services
686	Journal of Perinatal Medicine 1991 19 Suppl 1 p19-23 Multiple pregnancy and very early preterm births in a referral center Papiernik, E.	Does not specify whether any of the pregnancies have single fetal death, discordant fetal anomaly or discordant fetal growth
687	Journal of Ultrasound in Medicine 2007 26 (1) p97-103 Dizygotic twin pregnancy discordant for sirenomelia Nisenblat, V.	A case report of sirenomelia
688	Obstetrics and Gynecology 1994 84 (1) p107-109 Outcome of twin pregnancies complicated by a single intrauterine death: a comparison with viable twin pregnancies Kilby, M. D.	Retrospective study comparing outcomes of twin pregnancies complicated by single fetal death to viable twin pregnancies. No intervention in terms of referral to specialist care reported (19/20 cases of single fetal demise were managed conservatively)
689	Plos Medicine 2005 2 (6) p0521-0527 High risk of unexpected late fetal death in monochorionic twins despite intensive ultrasound surveillance: A cohort study Barigye, O.	Population is uncomplicated twin pregnancies
690	Seminars in Perinatology 1995 #19 (5) p387-403 Antepartum management of the multiple gestation: The case for specialized care Newman, R. B.	Review article, no new data reported
691	Singapore Medical Journal 2005 46 (8) p401-406 Outcomes of twin-twin transfusion syndrome managed by a specialised twin clinic Lim, Y. K.	Management of pregnancies with fetofetal transfusion syndrome is outside the guideline scope
692	Twin Research and Human Genetics: the Official Journal of the International Society for Twin Studies 2006 9 (3) p438-443 Perinatal outcomes with laser surgery for twin-twin transfusion syndrome Gray, P. H.	Management of pregnancies with fetofetal transfusion syndrome is outside the guideline scope
693	Ultrasound in obstetrics and gynecology : the official journal of the International Society of Ultrasound in Obstetrics and Gynecology 2000 15 (6) p473-478 Routine ultrasound fetal examination in pregnancy: the 'Alesund' randomized controlled trial Eik-Nes, S. H.	Routine ultrasound scans in singleton and twin pregnancies, with no subgroup analysis. Does not report on referral outcomes
694	Ultrasound in Obstetrics and Gynecology 2005 26 p323 Randomized clinical trial of expectant management versus	Abstract only - full paper has been considered separately for this question

No.	Bibliographic information	Reason for exclusion
	laser therapy for monochorionic-diamniotic twin gestations affected by selective intrauterine growth restriction and absent end-diastolic velocity of the umbilical artery [abstract] Quintero, R. A.	
695	Australian and New Zealand Journal of Obstetrics and Gynaecology 2009 49 (5) p461-466 Twin deliveries and place of birth in NSW 2001-2005 Algert, C. S.	This cross-sectional study examines distribution of twin births by level of hospital, and the corresponding perinatal and maternal morbidity with their association with predictive factors. Not looking directly at indications for referral
696	Journal of Obstetrics and Gynaecology 2002 22 (2) p173-174 Twin pregnancy in a tertiary referral unit - Analysis of trends in the 1990s O'Connell, M. P.	A cross-sectional study examining trends in twin pregnancy in terms of prevalence, maternal age, parity, mode of delivery and gestational age at delivery. No report of referral to subspecialist services
697	Cochrane Database of Systematic Reviews 2009 (1) Specialised antenatal clinics for women with a multiple pregnancy for improving maternal and infant outcomes Dodd, J. M.	A systematic review with no included studies (no RCTs identified examining the role of 'specialised' antenatal clinics for women with a multiple pregnancy compared with 'standard' antenatal care in improving maternal and infant health outcomes)
698	Obstetrics and Gynecology 1993 81 (3) p387-391 Reduction in very low birth weight deliveries and perinatal mortality in a specialized, multidisciplinary twin clinic Ellings, J. M.	This study examines the effect of a specialised twin clinic on frequency of low birthweight. Indication for referral to specialist services not examined
699	American Journal of Obstetrics and Gynecology 2003 189 (4) p934-938 Specialized prenatal care and maternal and infant outcomes in twin pregnancy Luke, B.	This study evaluates the effect of an antenatal nutrition and education programme on twin pregnancy, neonatal and early childhood outcomes. Indications for referral to subspecialist services not examined
700	JOGNN - Journal of Obstetric, Gynecologic, and Neonatal Nursing 2001 30 (1) p52-60 Specialized care for twin gestations: improving newborn outcomes and reducing costs Ruiz, R. J.	This study examines the effectiveness of a twin clinic and its economic impact. Indications for referral to subspecialist services not examined
251	Ultrasound in Obstetrics and Gynecology 1995 6 (1) p43-49 Predictive value of antepartum ultrasound examination for anomalies in twin gestations Edwards, M. S.	This study evaluated diagnostic accuracy of ultrasound in the detection of fetal anomalies among twin pregnancies managed in a specialised antenatal twin clinic. No reported outcome data relevant to maternal/neonatal

No.	Bibliographic information	Reason for exclusion
		survival/morbidity or maternal satisfaction
474	British Journal of Obstetrics and Gynaecology 1981 88 (3) p222-230 The merits of special antenatal care for twin pregnancies O'Connor, M. C.	This study investigates bed rest and hospitalisation. It does not address the review question and the relevant intervention
476	International Journal of Gynaecology and Obstetrics 2002 77 (3) p223-229 Hospitalization vs. outpatient care in the management of triplet gestations Skrablin, S.	This study investigates bed rest and hospitalisation. It does not address the review question and the relevant intervention
701	American Journal of Obstetrics and Gynecology 2001 185(3) p689-696 Selective photocoagulation of communicating vessels in the treatment of monochorionic twins with selective growth retardation Quintero, R.A.	This is an experimental study with a population not relevant to the review question
702	Obstetrics, Gynaecology and Reproductive Medicine 2010 20 (9) p259-264 Twin pregnancy Cohen, K.	Narrative review

Chapter 10 Timing of birth

Review question

What is the optimal timing of delivery in women with uncomplicated multiple pregnancies?

No.	Bibliographic information	Reason for exclusion
703	BJOG: an International Journal of Obstetrics and Gynaecology 2010 117 (6) p667-675 Trends in incidence and mortality for triplets in Norway 1967-2006: The influence of assisted reproductive technologies Tandberg, A.	No separate data on the incidence of fetal death and neonatal mortality
705	Acta Geneticae Medicae et Gemellologiae 1991 40 (2) p181-192 Time trends in characteristics and outcome of twin pregnancies Moreault, L.	Audit of all twin pregnancies in a province including complicated pregnancies. Only outcomes reported are caesarean section and birth in tertiary centres
706	Acta Obstetrica et Gynecologica Scandinavica - Supplement 1975 (44) p5-12 Twin pregnancy. A clinical study of 335 cases Kauppila, A.	Audit of all twin pregnancies in an institution including complicated pregnancies. Small sample size (n=335)
707	American Journal of Obstetrics and Gynecology 2001 184 (3) p451-458 Perinatal mortality and neonatal morbidity rates among twin pairs at different gestational ages: optimal delivery timing at 37 to 38 weeks' gestation Hartley, R. S.	Audit of all twin pregnancies in Washington including complicated pregnancies. Small sample size (n=8150)
708	American Journal of Obstetrics and Gynecology 1999 181 (5 Pt 1) p1052-1056 Caesarean delivery of twins and neonatal respiratory disorders Chasen, S. T.	Clinical audit of women undergoing elective caesarean section without any comparison group (expectant management group)
709	American Journal of Obstetrics and Gynecology 1991 164 (1 Pt 1) p135-140 Cross-sectional analysis of triplet birth weight Jones, J. S.	Audit of triplet pregnancies in an institution including complicated pregnancies. Small sample size (n=196)
695	Australian and New Zealand Journal of Obstetrics and Gynaecology 2009 49 (5) p461-466 Twin deliveries and place of birth in NSW 2001-2005 Algert, C. S.	Audit of all twin pregnancies in New South Wales Hospitals including complicated pregnancies. Sample not large enough (n=6679) and not representative of population
710	Australian and New Zealand Journal of Obstetrics and Gynaecology 2004 44 (3) p222-227 Maternal and neonatal outcomes in 54 triplet pregnancies managed in an Australian tertiary centre Barkehall-Thomas, A.	Audit of triplet pregnancies in an institution including complicated pregnancies. Small sample size (n=54)
711	BMC Pregnancy and Childbirth 2006 6 p3 What is the optimal gestational age for twin delivery Bakr, A. F.	Nineteen out of 88 twin pregnancies in the elective delivery group had complications such as pre-eclampsia (n=7), oligohydromnios (n=4), antenatal fetal distress (n=5), and placental abruption (n=3). Study population is not truly elective birth group

Multiple pregnancy (appendices)

712	International Journal of Gynaecology and Obstetrics 2000 69 (1) p1-7 Frequency and significance of preterm delivery in twin pregnancies Buscher, U.	Audit of twin pregnancy outcome by a single gestational age cut off. Includes complicated pregnancies and does not distinguish between elective and spontaneous delivery
713	Journal of Maternal-Fetal and Neonatal Medicine 2003 13 (6) p414-Fetal Perinatal outcomes in monoamniotic gestations Roque, H.	Systematic review of case reports of monochorionic twins only
714	Journal of Nippon Medical School 2008 75 (4) p247-249 Elective cesarean as a risk factor for transfusion after delivery of twins Suzuki, S.	Study of women who needed blood transfusion after twin birth. Not relevant to any part of the question
715	Journal of Perinatal Medicine 2008 36 (6) p552-553 Optimal timing of elective cesarean delivery for twins Suzuki, S.	Clinical audit of women undergoing elective caesarean section; comparison group was elective caesarean section in singleton pregnancies rather than twin pregnancies receiving expectant management
716	Journal of Reproductive Medicine 1987 32 (5) p328-339 Outcomes of twin gestations at the University of Colorado Health Sciences Center, 1973-1983 Thompson, S. A.	Audit of twin pregnancies in an institution including complicated pregnancies. Small sample size (n=341)
717	Journal of the Irish Medical Association 4-13-1974 67 (7) p181-186 A review of twin pregnancies National Maternity Hospital, (1967-1971) Minogue, M.	Audit of twin pregnancies in an institution including complicated pregnancies. Small sample size (n=441)
718	Seminars in Perinatology 1986 10 (1) p39-43 The controversy of mode of delivery in twins: the intrapartum management of twin gestation (Part I) Cetrulo, C. L.	Audit of twin pregnancies in an institution including complicated pregnancies. Small sample size (n=314)
719	Fetal Diagnosis and Therapy 2002 17 (4) p209-217 Multifetal gestation - Maternal and perinatal outcome of 112 pregnancies Strauss, A.	Audit of all triplet pregnancies in an institution including complicated pregnancies. Small sample size (n=94 triplet pregnancy). Comparison group included singleton and twin pregnancies combined together
720	Twin Research 2001 4 (3) p137-140 Induction of labour and scheduled cesarean deliveries in twin pregnancies at the Port-Royal Maternity Hospital in Paris France Papiernik, E.	Audit of all twin pregnancies in an institution including complicated pregnancies
721	Journal of Perinatology 2005 25 (1) p4-7 Indicated and non-indicated preterm delivery in twin gestations: impact on neonatal outcome and cost Elliott, J. P.	Spontaneous delivery in uncomplicated pregnancies cannot be identified/separated for analysis
722	Journal of Perinatology 1991 11 (3) p207-212 Triplet pregnancy: changes in morbidity and mortality Creinin, M.	Audit of all multiple pregnancies in an institution including complicated pregnancies

467	Annals of African Medicine 2007 6 (1) p12-16 Triplet gestation: clinical outcome of 14 cases Adesiyun, A. G.	A case series of 14 cases. Perinatal outcome not reported according to gestational age at birth
130	Croatian Medical Journal 2003 44 (6) p734-739 Monochorionic twin pregnancy: retrospective analysis of predicted pregnancy outcome Matijevic, R.	Perinatal outcome data not reported according to gestational age at birth
476	International Journal of Gynaecology and Obstetrics 2002 77 (3) p223-229 Hospitalization vs. outpatient care in the management of triplet gestations Skrablin, S.	A retrospective study evaluating preventive hospitalisation to the standard outpatient-based antenatal care in women with triplet pregnancies. Perinatal outcome data not reported according to gestational age at birth
723	Acta Geneticae Medicae et Gemellologiae 1988 37 (1) p99-103 Management of triplet pregnancy Pons, J. C.	No perinatal outcome data by gestational age except birthweight represented in graphs (no numerical data could be extracted)
724	Acta Geneticae Medicae et Gemellologiae 1988 37 (3-4) p331-337 Perinatal mortality in multiple pregnancy patients Meehan, F. P.	No perinatal outcome data according to gestational age is reported
725	Acta Geneticae Medicae et Gemellologiae 1985 34 (1-2) p81-88 Triplet gestation: maternal and neonatal implications Syrop, C. H.	No data on timing of birth are reported
726	Acta Geneticae Medicae et Gemellologiae 1974 22 suppl p73-74 Conditions of delivery in multiple pregnancy. Observations on the Danzig population over twenty years Mierzejewski, W.	No perinatal outcome data according to gestational age are reported
727	Acta Obstetrica et Gynecologica Scandinavica 1995 74 (2) p129-131 Perinatal outcome after in vitro fertilisation Petersen, K.	No data on timing of birth are reported
728	Acta Obstetrica et Gynecologica Scandinavica 1992 71 (5) p347-350 Triplet, quadruplet and quintuplet pregnancies. Management and outcome Ron-El, R.	No data on timing of birth are reported
729	Acta Obstetrica et Gynecologica Scandinavica 1988 67 (1) p81-84 Twin pregnancy and the effects of prophylactic leave of absence on pregnancy duration and birth weight Rydholm, H.	Does not provide spontaneous delivery rates in twins beyond 35 weeks' gestation
730	American Journal of Perinatology 2009 26 (8) p587-590 Perinatal and neonatal outcomes of triplet gestations based on placental chorionicity Spencer, J. V.	The association between chorionicity and perinatal/neonatal outcomes in triplet gestation, not relevant to review question
731	American Journal of Obstetrics and Gynecology 2005 #193 (4) p1463-1471 Perinatal outcome of spontaneously conceived triplet pregnancies in relation to chorionicity Adegbite, A. L.	Birth outcome data in this retrospective study are presented according to chorionicity, timing of birth not analysed
732	American Journal of Obstetrics and Gynecology 2005 #192 (2) p464-469	Gestational age specific rates of stillbirth, neonatal and infant mortality

Multiple pregnancy (appendices)

	Mode of delivery and risk of stillbirth and infant mortality in triplet gestations: United States, 1995 through 1998 Vintzileos, A. M.	presented in graphical form. No numerical data could be extracted
733	American Journal of Obstetrics and Gynecology 2002 186 (5) p910-912 Demographic and obstetric factors influencing pregnancy outcome in twin gestations Tarter, J. G.	This study examines the association between demographic factors and birth outcomes but no useful data pertaining to timing of birth are reported
734	American Journal of Obstetrics and Gynecology 2002 186 (4) p765-767 Outcomes of dichorionic triplet pregnancies Chasen, S. T.	Case series with no comparison group
735	American Journal of Obstetrics and Gynecology 2002 187 (3) p752-757 The association between maternal factors and perinatal outcomes in triplet pregnancies Luke, B.	Perinatal outcomes not reported according to gestational age
736	American Journal of Obstetrics and Gynecology 1998 179 (4) p942-945 Neonatal outcomes in triplet gestations after a trial of labor Grobman, W. A.	Study group in this interventional study comprises induced and spontaneous labour
737	American Journal of Obstetrics and Gynecology 1996 174 (1 Pt 1) p66-71 Perinatal mortality in twins and singletons matched for gestational age at delivery at > or = 30 weeks Kilpatrick, S. J.	Comparison group is singleton pregnancies
738	American Journal of Obstetrics and Gynecology 1993 168 (2) p480-484 Predictors of human gestational length Mittendorf, R.	Population not relevant - women who gave birth to singletons
739	American Journal of Obstetrics and Gynecology 1992 167 (4 Pt 1) p1117-1120 Antepartum management of triplet gestations Peaceman, A. M.	Evaluation of a management protocol of antenatal care in triplet pregnancy. Not relevant to review question
740	American Journal of Perinatology 1991 8 (5) p333-337 Management of triplet pregnancies in the 1980s--are we doing better? Weissman, A.	No data on timing of birth reported
741	American Journal of Obstetrics and Gynecology 6-1-1982 143 (3) p360-367 The effect of type of delivery upon neonatal outcome in premature twins Barrett, J. M.	Data presented according to mode of delivery rather than timing of birth
742	Archives of Disease in Childhood 1989 64 (5) p670-677 Pregnancy outcome at 24-31 weeks' gestation: mortality Wariyar, U.	Study population comprises singleton pregnancies
743	Archives of Gynecology and Obstetrics 2005 271 (4) p320-324 Antepartum management and neonatal outcome of triplet pregnancies Zanconato, G.	No perinatal outcome data according to gestational age are reported
744	Australian and New Zealand Journal of Obstetrics and Gynaecology 2003 43 (5) p397	Survey of current obstetric practice regarding management of twin births. Different population and study design

	The management of twin births in Australia and New Zealand Roberts, C. L.	from review question
745	Australian and New Zealand Journal of Obstetrics and Gynaecology 2002 42 (1) p51-54 Higher order multiple pregnancies in New South Wales 1990-1999 Roberts, C. L.	Study population included quadruplets (n=5) and quintuplets (n=1) in addition to triplets (n=285). Data were not reported for triplets separately. Outcome data not reported according to gestational age
746	BJOG: an International Journal of Obstetrics and Gynaecology 2006 113 (5) p528-535 Preterm birth and multiple pregnancy in European countries participating in the PERISTAT project Blondel, B.	No perinatal outcome according to gestational age at birth is reported
747	British Journal of Obstetrics and Gynaecology 1978 85 (7) p505-509 Triplet pregnancy Daw, E.	Perinatal outcomes not reported according to gestational age
748	British Medical Journal 2003 326 (7386) p448 Randomised controlled trial for twin delivery Barrett, J. F. R.	Letter to editor, no original data reported
749	Clinical Obstetrics and Gynecology 2004 47 (1) p237-247 Timing of Delivery in Multiple Gestation Chang, E. Y.	A review article, not original research
750	Clinical Obstetrics and Gynecology 1998 41 (1) p30-35 Is the route of delivery a meaningful issue in twins? Benachi, A.	A review article, not original research
751	Database of Abstracts of Reviews of Effects 2010 (2) Cesarean delivery for twins: a systematic review and meta-analysis (Structured abstract) Centre for Reviews and Dissemination.	Structured abstract. Original article has been considered separately
752	East African Medical Journal 1985 62 (11) p802-806 A two and a half year review of some aspects of twin delivery at the Kenyatta National Hospital Oyieke, J. B.	No data on timing of birth are reported
753	European Journal of Obstetrics, Gynecology, and Reproductive Biology 1998 76 (2) p131-139 Management and outcome of triplet pregnancy Pons, J. C.	No perinatal outcome data by gestational age
754	Folia Histochemica et Cytobiologica 2007 45 Suppl 1 pS149-S151 Perinatal outcome analysis of twin pregnancies at the Department of Obstetrics and Gynecology Central Clinical Hospital of Ministry of Interior and Administration in Warsaw in the years 2005-2006 Szyborska, T.	The study population is divided into four groups according to the assisted reproductive technique used in conception. Study sample could not be generalised
755	Gynecologic and Obstetric Investigation 2000 50 (2) p96-99 The outcome of triplet versus twin pregnancies Ziadeh, S. M.	No perinatal outcome data according to gestational age are reported
756	Human Reproduction 2006 21 (4) p1025-1032	No data on timing of birth and associated neonatal outcome are

Multiple pregnancy (appendices)

	Perinatal outcome of 12 021 singleton and 3108 twin births after non-IVF-assisted reproduction: A cohort study Ombelet, W.	reported
757	International Journal of Gynecology and Obstetrics 2003 80 (3) p255-261 Effect of prolongation of pregnancy on perinatal mortality Onah, H. E.	Data not presented numerically
758	Journal of Obstetrics and Gynaecology 2006 26 (3)-204 Obstetric complications and perinatal outcome in triplet pregnancies Al-Suleiman, S. A.	Outcomes for different gestational ages at birth not reported. No comparison between elective and expectant management is made
696	Journal of Obstetrics and Gynaecology 2002 22 (2) p173-174 Twin pregnancy in a tertiary referral unit - Analysis of trends in the 1990s O'Connell, M. P.	This cross-sectional study does not distinguish between uncomplicated and complicated multiple pregnancies
759	Journal of Obstetrics and Gynaecology 1982 2 (4) p224-228 The timing of delivery in twin pregnancy Houlton, M. C. C.	No numerical data is reported. Data presented in graphs. Not possible to extract numerical values
760	Journal of Perinatal Medicine 2010 38 (3) p297-303 Increasing rates of preterm twin births coincide with improving twin pair survival Hartley, R. S.	Perinatal outcomes not reported according to gestational age
761	Journal of Perinatal Medicine 2003 31 (3) p242-250 Triplets and quadruplets in Switzerland: comparison with singletons, and evolution over the last decade Arlettaz, R.	Perinatal outcomes not reported according to gestational age
762	Journal of Perinatal Medicine 2000 28 (1) p49-53 Perinatal factors and preterm delivery in an Irish obstetric population Burke, C.	This cross-sectional study examined aetiological factors and consequent perinatal mortality in Ireland. Although multiple pregnancy is identified as an aetiological factor and numbers of late and early preterm births are reported the data on perinatal mortality in multiple pregnancies are not reported separately
763	Journal of Reproductive Medicine for the Obstetrician and Gynecologist 1999 44 (7) p595-600 Effects of placental chorionicity on outcome in twin pregnancies: A cohort study Minakami, H.	The association between chorionicity and perinatal/neonatal outcomes in twin pregnancies, not relevant to review question
764	Minerva Ginecologica 2009 61 (1) p23-33 Actual controversies in twin delivery: from the analysis of the case histories to a reasoned protocol Valsecchi, L.	No numerical data reported
765	National Vital Statistics Reports 4-29-1999 47 (18) p1-96 Births: final data for 1997 Ventura, S. J.	Descriptive statistics on birth in the USA during 1 year. Data on numbers of multiple births are reported according to maternal demographic characteristic and plurality of birth but gestational age profile and birth

		outcomes are not reported
766	Obstetrics and Gynecology 2008 111 (3) p695-703 Neonatal outcomes of twin pregnancy according to the planned mode of delivery Schmitz, T.	This study compares elective caesarean section to elective vaginal delivery, rather than expectant management
767	Obstetrics and Gynecology 2004 104 (1) p110-113 Nulliparity and duration of pregnancy in multiple gestation ina-Mumuney, A. J.	This paper examines the association between parity and adverse perinatal outcomes. Not related to the review question
768	Obstetrics and Gynecology 1998 91 (3) p342-348 Neonatal morbidity and mortality associated with triplet pregnancy Kaufman, G. E.	The data reported in this study are included in a larger and more recent study by Devine et al (2001), ⁷⁶⁹ (which has been included)
770	Progress in Clinical and Biological Research 1981 69A p203-206 The outcome of twin pregnancies in Aberdeen MacGillivray, I.	No perinatal outcome data according to gestational age is reported
771	Reproductive Biomedicine Online 2005 11 (1) p76-85 Obstetric and perinatal outcome of 1655 ICSI and 3974 IVF singleton and 1102 ICSI and 2901 IVF twin births: a comparative analysis Ombelet, W.	No data on timing of birth are reported
772	Twin Research and Human Genetics 2006 9 (5) p685-690 Outcome of twins delivery; predictors for successful vaginal delivery: A single center experience Salim, R.	Study group in this interventional study comprises induced and spontaneous labour
773	Vital and Health Statistics 1997 Series 21, Data on Natality, Marriage, and Divorce. (55) p1-20 Triplet births: trends and outcomes, 1971-94 Martin, J. A.	Data on birthweight at different gestational ages in triplet pregnancy reported in this cross-sectional study, but it does not distinguish between uncomplicated and complicated multiple pregnancies
774	Vital and Health Statistics 1994 Series 21, Data on Natality, Marriage, and Divorce. (51) p1-24 Cesarean delivery in the United States, 1990 Taffel, S. M.	Data on caesarean section in twin and triplet pregnancies reported but the study does not distinguish between uncomplicated and complicated multiple pregnancies
775	Vital and Health Statistics 1992 Series 21, Data on Natality, Marriage, and Divorce. (50) p1-17 Health and demographic characteristics of twin births: United States, 1988 Taffel, S. M.	Data on birthweight at different gestational ages in twin pregnancies reported in this cross-sectional study but it does not make a distinction between uncomplicated and complicated multiple pregnancies
776	Acta Obstetrica et Gynecologica Scandinavica 2004 83 (6) p554-559 Maternal and neonatal outcome of 93 consecutive triplet pregnancies with 71% vaginal delivery Alran, S.	Trial of labour group included both induced as well as spontaneous vaginal delivery compared with elective caesarean section. No comparison of expectant versus elective management of birth
777	American Journal of Perinatology 2000 17 (6) p303-307 Outcome of 306 twin deliveries according to first twin presentation and method of delivery	Outcome data are presented according to planned mode of delivery rather than timing of birth

Multiple pregnancy (appendices)

	Grisaru, D.	
778	American Journal of Obstetrics and Gynecology 2003 188 (1) p220-227 Cesarean delivery for twins: A systematic review and meta-analysis Hogle, K. L.	Systematic review of studies comparing elective caesarean section to elective vaginal delivery rather than expectant management
779	American Journal of Obstetrics and Gynecology 1996 174 (5) p1551-1556 The maternal and neonatal outcome of triplet gestations Albrecht, J. L.	No perinatal outcome data according to gestational age are reported
780	Australian and New Zealand Journal of Obstetrics and Gynaecology 1988 28 (1) p25-28 Mode of delivery of preterm twins Doyle, L. W.	Mode of delivery (caesarean section versus vaginal birth) rather than expectant versus elective birth
781	Journal of Reproductive Medicine 1981 26 (5) p243-246 Triplet pregnancies Michlewitz, H.	A case series of triplet pregnancies (n=15) reporting perinatal mortality and morbidity according to birth order
782	Birth 2000 27 (3) p185-188 Perinatal outcome in 41 sets of triplets in Jordan Ziadeh, S. M.	This observational study compares perinatal outcomes in triplets delivered vaginally versus those delivered by caesarean section. Study of the mode rather timing of birth
783	Australian and New Zealand Journal of Obstetrics and Gynaecology 1994 34 (1) p50-53 A review of 19 sets of triplets: The positive results of vaginal delivery Clarke, J. P.	No perinatal outcome data according to gestational age are reported
784	Obstetrics and Gynecology Clinics of North America 1995 22 (2) p235-246 Labor and delivery management of the multiple gestation. de Veciana, M.	Review article, not original research
785	Gynecologic and Obstetric Investigation 1995 40 (3) p174-178 When is the optimal time for delivery?--Purely from the fetuses' perspective Minakami, H.	Similar study ⁷⁸⁶ by same first author with updated results has been included
787	American Journal of Obstetrics and Gynecology 1995 173 (2) p432-437 Cohort study of twinning in an academic health center: changes in management and outcome over forty years Saacks, C. B.	No data on timing of birth are reported
788	Prenatal and Neonatal Medicine 2000; 5:(6)349-56 Mechanisms of fetal death in 783 twin pregnancies from 22 weeks at a level 3 perinatal center, 1993-98: A quality analysis.. Papiernik E, et al.	Clinical audit of fetal deaths in twin pregnancies. Incidence rate according to gestational age at birth is not reported
789	Best Practice and Research in Clinical Obstetrics and Gynaecology 2004 18 (4) p625-630 Delivery of the term twin	Review article. No new data reported

	Barrett, J. F.	
790	Clinical Neonatology 2006 13 (1) p12-15 Clinical analysis of multiple gestation including triplets and quadruplets Tsai, Y. C.	Perinatal outcome data not reported according to gestational age at birth
791	Clinics in Obstetrics and Gynaecology 1980 7 (3) p581-600 Twins and other multiple deliveries MacGillivray, I.	Review article. No new data reported
792	Cochrane Database of Systematic Reviews 2009 (1) Elective delivery of women with a twin pregnancy from 37 weeks' gestation Dodd, Jodie M.	This Cochrane review includes only one RCT by Suzuki et al (2000) ⁷⁹³ which has been considered separately
794	Current Opinion in Obstetrics and Gynecology 2005 17 (6) p579-583 Should we deliver twins electively at 37 weeks' gestation? Dodd, J. M.	Review article with no new data
795	Jcpsp, Journal of the College of Physicians and Surgeons - Pakistan 2008 18 (4) p217-221 Fetomaternal outcome in triplet pregnancy Mazhar, S. B.	Perinatal outcome data not reported according to gestational age at birth
796	Journal of Maternal-Fetal Medicine 1999 8 (6) p256-261 Impact of gestational age at delivery of the economics of triplet pregnancy Malone, F. D.	This study measured the cost associated with preterm triplet birth
797	Journal of the American Medical Association 1996 276 (6) p452 Date of delivery in multifetal pregnancies Luke, B.	Letter to editor. No new data reported
798	Medical Journal of Australia 5-17-1993 158 (10) p659-663 Triplets and quadruplets born in Victoria between 1982 and 1990. The impact of IVF and GIFT on rising birthrates Jonas, H. A.	No data on timing of birth
799	Nebraska State Medical Journal 1968 53 (10) p491-493 Twin gestations at woman's hospital, St. Lukes hospital center. II Murdoch, D. E.	Time interval between births of twins is examined. No data on gestational age at birth is presented
800	Nigerian Journal of Medicine: Journal of the National Association of Resident Doctors of Nigeria 2009 18 (1) p29-31 Birth management after in vitro fertilisation: a report of 178 cases Pacarada, M.	No separate data on multiple births
801	Nigerian Journal of Clinical Practice 2008 11 (3) p231-234 A 20-year review of twin births at Mater Misericordiae Hospital, Afikpo, South Eastern Nigeria Sunday-Adeoye, I.	No data on gestational age at birth

Multiple pregnancy (appendices)

802	Obstetrical and Gynecological Survey 2005 60 (8) p550-554 Management of multiple pregnancy: labor and delivery Ayres, A.	Review article. No new data reported
803	Obstetrics and Gynecology 1981 57 (4) p458-463 Triplet and quadruplet pregnancies and management Ron-El, R.	No data on timing of birth
804	Progress in Clinical and Biological Research 1981 69A p207-215 The Northwestern University multihospital twin study: III. Obstetric characteristics and outcome Berger, G. S.	No data on timing of birth
805	American Journal of Obstetrics and Gynecology 2004 190 (5) p1313-1321 Trends in twin neonatal mortality rates in the United States, 1989 through 1999: influence of birth registration and obstetric intervention Ananth, C. V.	Perinatal outcome not reported according to gestational age
806	Twin Research 2000 3 (1) p2-6 Risk of premature birth in multifetal pregnancy Minakami, H.	Data include all multifetal pregnancies, not restricted to twins and triplets. No perinatal outcome data according to gestational age
807	Archives of Gynecology and Obstetrics 2010 281 (1) p87-90 Perinatal outcomes of elderly primiparous dichorionic twin pregnancies conceived by in vitro fertilization compared with those conceived spontaneously Suzuki, S.	No perinatal outcome data according to gestational age at birth
808	BJOG: an International Journal of Obstetrics and Gynaecology 2010 117 (6) p676-682 Selected neonatal outcomes in dizygotic twins after IVF versus non-IVF pregnancies Kallen, B.	No perinatal outcome data according to gestational age at birth
809	Database of Abstracts of Reviews of Effects 2010 (3) Caesarean delivery for twins: a systematic review and meta-analysis (Structured abstract) Centre for Reviews and Dissemination.	Structured abstract of a systematic review comparing elective caesarean section and elective vaginal delivery rather than expectant management
810	Epidemiology 2010 21 (4) p521-527 Mortality risk among preterm babies: immaturity versus underlying pathology Basso, O.	This study reported data on neonatal death in preterm twins and singletons (<36 weeks). No data on perinatal outcome of babies born after 36 weeks
811	Human Reproduction 2010 25 (9) p2346-2353 Secular trends in gestational age and birthweight in twins Gielen, M.	No perinatal outcome data according to gestational age at birth
812	Human Reproduction 2010 25 (4) p1035-1043 Differences in outcome between twins and singletons born very preterm: results from a population-based European cohort Papiernik, E.	This study reported perinatal outcome data in very preterm twins and singletons (<31 weeks). No data on perinatal outcome of babies born after 31 weeks

813	Journal of Maternal-Fetal and Neonatal Medicine 2010 23 (6) p506-Fetal Monoamniotic twins in contemporary practice: A single-center study of perinatal outcomes Baxi, L. V.	Retrospective cohort analysis of 25 monoamniotic twin pregnancies. No data on perinatal outcome according to gestational age
814	Journal of Nippon Medical School = Nihon Ika Daigaku Zasshi 2010 77 (2) p93-96 Increased rate of elective cesarean delivery and neonatal respiratory disorders in twin pregnancies Suzuki, S.	Examines association between elective caesarean birth and incidence of neonatal respiratory syndrome. No details on timing of birth
815	Journal of Obstetrics and Gynaecology Canada: JOGC 2010 32 (5) p429-434 Parameters associated with outcome in third trimester monochorionic diamniotic twin pregnancies Shrim, A.	No perinatal outcome data according to gestational age at birth
816	Journal of Obstetrics and Gynaecology 2010 30 (4) p354-356 Maternal obesity as a risk factor for very pre-term delivery in dichorionic twin pregnancies Suzuki, S.	Examines the association between maternal characteristics and risk of very preterm birth in dichorionic twin pregnancies. Perinatal outcome data are not stratified according to gestational age at birth
817	Pediatrics 2010 125 (1) p4-15 Annual summary of vital statistics: 2007 Heron, M.	No data on timing of birth in multiple pregnancies were reported
386	American Journal of Obstetrics and Gynecology 2010 203 (2) p133-136 Contemporary management of monochorionic diamniotic twins: outcomes and delivery recommendations revisited Smith, N. A.	Gestational age data were stratified according to complicated and uncomplicated twin pregnancies. No data on spontaneous births. No perinatal outcome data according to gestational age
818	Revista Da Associacao Medica Brasileira 2010; 56 (4) p 447-451 Perinatal outcome of twin pregnancies delivered in a teaching hospital Assuncao RA.	Audit of twin pregnancies in an institution including a large proportion of complicated pregnancies. Small sample size (n=283)
819	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine, #2010 Granada Spain. Conference Start (var.pagings) p380-Fetal The impact of maternal obesity on neonatal and maternal outcomes and the mode of delivery in twin gestations >=32 weeks Dueckelmann, A. M.	Conference abstract
820	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine, #2010 Granada Spain. Conference Start (var.pagings) p272-Fetal What is the optimal gestational age for multiple pregnancies Gaber, A. L	Conference abstract
821	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine, #2010 Granada Spain. Conference Start (var.pagings) p592-Fetal Twin pregnancy and advanced maternal age: Complications and perinatal outcomes	Conference abstract

Multiple pregnancy (appendices)

	Alvir, Ivaro	
822	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p410-Fetal Comparison of morbidity in very low birth weight neonates singletons and multiples Gaitana, C.	Conference abstract
823	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p286-Fetal Perinatal outcomes in Uncomplicated twin pregnancies after 32 weeks. Does chorionicity matters Gonzlez, PernE	Conference abstract
824	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p134-Fetal Fetal mortality term gestation in last two decades - A descriptive study Turizo, S. F.	Conference abstract
825	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p300-Fetal Neonatal outcome of multiple pregnancies Orvos, H.	Conference abstract
826	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p461-Fetal Multiple pregnancy: Epidemiology, gestation and delivery Ocn, HernndezO	Conference abstract
827	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p34-Fetal Monitoring of fetal growth and timing of delivery in monochorionic twin pregnancies Hack, K. E. A.	Conference abstract
828	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p116-Fetal Route of delivery and outcome of twin pregnancies controlled at Miguel Servet Unversity hospital (Zaragoza, Spain) Suer, S. M.	Conference abstract
829	Journal of Maternal-Fetal and Neonatal Medicine 2010 22nd European Congress of Perinatal Medicine,;#2010 Granada Spain. Conference Start (var.pagings) p276-Fetal Mode of delivery in twin pregnacies at virgen del rocio hospital Troncoso, DantasE	Conference abstract

830	Fertility and Sterility 2010 #2010 Denver, CO United States. Conference Start (var.pagings) pS22 A comparison of IVF triplets; electively vs. spontaneously reduced to twin gestations Ata, B.	Conference abstract
832	Twin Research and Human Genetics 2010 13th International Congress on Twin Studies Seoul South Korea. Conference Start (var.pagings) p247-248 Nationwide comparison of perinatal outcome of induced versus natural twins in the Netherlands 2000-2007 Bensdorp, A.	Conference abstract