

## AVAILABLE MFMU DATA SET PUBLICATIONS

- 1. BEAM Trial:** Randomized Clinical Trial of the Beneficial Effects of Antenatal Magnesium
- 2. CAPPS:** Combined Antioxidants and Preeclampsia Prediction Studies
- 3. Cervical Ultrasound Study:** Mid-Trimester Endovaginal Sonography in Women at High Risk for Spontaneous Preterm Delivery
- 4. Cesarean Section Registry:** An Observational Study of Cesarean Section and Vaginal Birth After Cesarean Section
- 5. Factor V Leiden:** A Prospective Observational Study of Effects of Factor V Leiden Mutation on Maternal and Perinatal Outcome
- 6. HRA(High Risk Aspirin):** Clinical Trial of Low-Dose Aspirin To Prevent Preeclampsia in High Risk Women
- 7. LRA (Low Risk Aspirin):** Randomized Trial of Low-Dose Aspirin to Prevent Preeclampsia
- 8. ODNs:** MFMU Network Registry of Obstetrical Determinants of Neonatal Survival
- 9. Progesterone Trial:** Randomized Clinical Trial of 17 alpha-Hydroxyprogesterone Caproate for Prevention of Preterm Birth in High Risk Women
- 10. Progesterone Follow-up:** A Follow-Up Study of the Children in the Progesterone Trial
- 11. Steroids Trial:** A Randomized Placebo-Controlled Clinical Trial of Antenatal Corticosteroid Regimens
- 12. STTARS:** A Randomized Study of Seventeen Alpha-Hydroxyprogesterone Caproate in Twins and Triplets

## AVAILABLE MFMU DATA SET PUBLICATIONS

### 1. BEAM Trial: Randomized Clinical Trial of the Beneficial Effects of Antenatal Magnesium

**Objective:** To test the hypothesis that prophylactic magnesium sulfa at 24-31 weeks gestation for whom delivery is imminent (with advanced preterm labor, with pPROM, or for whom delivery is less than 24 hours), reduces the risk of mortality and moderate to severe cerebral palsy at 2 years of age in their children.

**Conclusion:** MgSO<sub>4</sub> may afford the fetus destined to be born preterm substantial protection against cerebral palsy, without increasing the risk of stillbirth or infant death.

#### **Publications:**

Rouse DJ, Hirtz DG, Thom E, Varner MW, Spong CY, Mercer BM, Iams JD, Wapner RJ, Sorokin Y, Alexander JM, Harper M, Thorp JM Jr, Ramin SM, Malone FD, Carpenter M, Miodovnik M, Moawad A, O'Sullivan MJ, Peaceman AM, Hankins GD, Langer O, Caritis SN, Roberts JM. **A randomized, controlled trial of magnesium sulfate for the prevention of cerebral palsy.** N Engl J Med 2008;359:(9)895-905. PMID: 18753646. PMCID: PMC2803083.

Costantine MM, Weiner SJ. **Effects of antenatal exposure to magnesium sulfate on neuroprotection and mortality in preterm infants.** Obstet Gynecol 2009;114(2 pt 1):354-364. PMID: 19622997. PMCID: PMC2761069.

Costantine MM, Weiner SJ, Rouse DJ, Hirtz DG, Varner MW, Spong CY, Mercer BM, Iams JD, Wapner RJ, Sorokin Y, Thorp JM Jr, Ramin SM, O'Sullivan MJ, Peaceman AM, Simhan HN. **Umbilical cord blood biomarkers of neurologic injury and the risk of cerebral palsy or infant death.** Int J Dev Neurosci 2011;29(8):917-22. PMID:21736934. PMCID:PMC3210377.

Johnson LH, Mapp DC, Rouse DJ, Spong CY, Mercer BM, Leveno KJ, Varner MW, Iams JD, Sorokin Y, Ramin SM, Miodovnik M, O'Sullivan MJ, Peaceman AM, Caritis SN. **Association of cord blood magnesium concentration and neonatal resuscitation.** J Pediatr. 2012 Apr;160(4):573-577. PMID: 22056282. PMCID:PMC3998513

Costantine MM, Clark EA, Lai Y, Rouse DJ, Spong CY, Mercer BM, Sorokin Y, Thorp JM Jr, Ramin SM, Malone FD, Carpenter M, Miodovnik M, O'Sullivan MJ, Peaceman AM, Caritis SN. **Association of polymorphisms in neuroprotection and oxidative stress genes and neurodevelopmental outcomes after preterm birth.** Obstet Gynecol 2012;120(3):542-50. PMID: 22914463. PMCID: PMC3904537.

Grobman WA, Lai Y, Rouse DJ, Spong CY, Varner MW, Mercer BM, Leveno KJ, Iams JD, Wapner RJ, Sorokin Y, Thorp JM Jr, Ramin SM, Malone FD, O'Sullivan MJ, Hankins GD, Caritis SN; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **The association of cerebral palsy and death with small for-gestational-age birthweight in preterm neonates by individualized and population-based percentiles.** Am J Obstet Gynecol 2013 Oct;209(4):340. PMID: 23770470. PMCID: PMC3786044.

### 2. CAPPs: Combined Antioxidants and Preeclampsia Prediction Studies

**Objective:** To determine whether antioxidants reduce the frequency of serious maternal and infant complications associated with pregnancy related hypertension.

**Conclusion:** Therapy initiated with the antioxidant Vitamins C and E prior to 17 weeks gestation in nulliparous low risk women does not reduce the frequency of complications associated with pregnancy related hypertension, nor does this treatment reduce the diagnosis of preeclampsia.

#### **Publications:**

Roberts JM, Myatt L, Spong CY, Thom EA, Hauth JC, Leveno KJ, Pearson GD, Wapner RJ, Varner MW, Thorp JM Jr, Mercer BM, Peaceman AM, Ramin SM, Carpenter MW, Samuels P, Sciscione A, Harper M, Smith WJ, Saade G, Sorokin Y, Anderson GB. **Vitamins C and E to prevent complications of pregnancy-associated hypertension.** N Engl J Med 2010;362(14):1282-1291. PMID: 20375405. PMCID: PMC3039216.

Hauth JC, Clifton RG, Roberts JM, Spong CY, Myatt L, Leveno KJ, Pearson GD, Varner MW, Thorp JM Jr, Mercer BM, Peaceman AM, Ramin SM, Sciscione A, Harper M, Tolosa JE, Saade G, Sorokin Y, Anderson GB. **Vitamin C and E supplementation to prevent spontaneous preterm birth: A randomized controlled trial.** Obstet Gynecol 2010;116(3):653-658. PMID: 20733448. PMCID: PMC2987650.

Hauth JC, Clifton RG, Roberts JM, Myatt L, Spong CY, Leveno KJ, Varner MW, Wapner RJ, Thorp JM Jr, Mercer BM, Peaceman AM, Ramin SM, Carpenter MW, Samuels P, Sciscione A, Tolosa JE, Saade G, Sorokin Y, Anderson GD. **Maternal insulin resistance and preeclampsia.** Am J Gynecol 2011;204(4):327. PMID: 21458622. PMCID: PMC3217262.

Carreno CA, Clifton RG, Hauth JC, Myatt L, Roberts JM, Spong CY, Varner MW, Thorp JM Jr, Mercer BM, Peaceman AM, Ramin SM, Carpenter MW, Sciscione A, Tolosa JE, Saade GR, Sorokin Y. **Excessive early gestational weight gain and risk of gestational diabetes mellitus in nulliparous women.** Obstet Gynecol 2012;119(6):1227-33. PMID: 22617588. PMCID: PMC3360415.

Myatt L, Clifton RG, Roberts JM, Spong CY, Hauth JC, Varner MW, Thorp JM Jr, Mercer BM, Peaceman AM, Ramin SM, Carpenter MW, Iams JD, Sciscione A, Harper M, Tolosa JE, Saade G, Sorokin Y, Anderson GD. **First-trimester prediction of preeclampsia in nulliparous women at low risk.** Obstet Gynecol 2012;119(6):1234-42. PMID: 22617589. PMCID: PMC3360523.

Myatt L, Clifton RG, Roberts JM, Spong CY, Hauth JC, Varner MW, Wapner RJ, Thorp JM Jr, Mercer BM, Grobman WA, Ramin SM, Carpenter MW, Samuels P, Sciscione A, Harper M, Tolosa JE, Saade G, Sorokin Y, Anderson GD. **The Utility of Uterine Artery Doppler Velocimetry in Prediction of Preeclampsia in a Low-Risk Population.** Obstet Gynecol 2012;120(4):815-822. PMID: 22996099. PMCID: PMC3449210.

Weissgerber TL, Gandley RE, McGee PL, Spong CY, Myatt L, Leveno KJ, Thorp JM Jr, Mercer BM, Peaceman AM, Ramin SM, Carpenter MW, Samuels P, Sciscione A, Harper M, Tolosa JE, Saade G, Sorokin Y; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Haptoglobin phenotype, preeclampsia risk and the efficacy of vitamin C and E supplementation to prevent preeclampsia in a racially diverse population.** PLoS One 2013;8(4):e60479. PMID: 23573260. PMCID:PMC3616124.

Johnson J, Clifton RG, Roberts JM, Myatt L, Hauth JC, Spong CY, Varner MW, Wapner RJ, Thorp JM Jr, Mercer BM, Peaceman AM, Ramin SM, Samuels P, Sciscione A, Harper M, Tolosa JE, Saade G, Sorokin Y; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Pregnancy outcomes with weight gain above or below the 2009 Institute of Medicine guidelines.** Obstet Gynecol 2013 May;121(5):969-75. PMID: 23635732. PMCID: PMC3971915.

Myatt L, Clifton R, Roberts J, Spong C, Wapner R, Thorp J Jr, Mercer B, Peaceman A, Ramin S, Carpenter M, Sciscione A, Tolosa J, Saade G, Sorokin Y, Anderson G; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Can changes in angiogenic biomarkers between the first and second trimesters of pregnancy predict development of pre-eclampsia in a low-risk nulliparous patient population?** BJOG 2013 Sep;120(10):1183-91. PMID: 23331974 PMCID: PMC4104359.

Makhlouf MA, Clifton RG, Roberts JM, Myatt L, Hauth JC, Leveno KJ, Varner MW, Thorp JM, Mercer BM, Peaceman AM, Ramin SM, Iams JD, Sciscione A, Tolosa JE, Sorokin Y; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Adverse pregnancy outcomes among women with prior spontaneous or induced abortions.** Am J of Perinatol. 2013 Dec 17 [Epub ahead of print]. PMID: 24347257. PMCID: PMC4061262.

Weissgerber TL, McGee PL, Myatt L, Hauth JC, Varner MW, Wapner RJ, Thorp JM, Mercer BM, Peaceman AM, Ramin SM, Samuels P, Sciscione A, Harper M, Saade G, Sorokin Y; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Haptoglobin phenotype and abnormal uterine artery doppler in a racially diverse cohort.** J Matern Fetal Neonatal Med. 2014 Jan 13. [Epub ahead of print]. PMID: 24345080. PMCID: PMC4096612.

### **3. Cervical Ultrasound Study: Mid-Trimester Endovaginal Sonography in Women at High Risk for Spontaneous Preterm Delivery**

**Objective:** To test the hypothesis that mid-trimester endovaginal sonography can identify a group of high risk women whose cervical characteristics define them as candidates for a future clinical trial of cerclage or other intervention strategies.

**Conclusion:** Cervical length at 16-18 weeks of gestation predicts spontaneous preterm delivery < 35 weeks in women with a prior early spontaneous delivery. Information derived from serial scans is associated with higher relative risk and sensitivity. These data will be useful in designing future intervention trials.

#### **Publications:**

Berghella V, Owen J, MacPherson CA, Yost NP, Swain M, Dildy GA, Miodovnik M, Langer O, Sibai BM. **Natural history of cervical funneling in women at high risk for spontaneous preterm birth.** Obstet Gynecol 2007;109(4):863-869. PMID: 17400847.

### **4. Cesarean Section Registry: An Observational Study of Cesarean Section and Vaginal Birth After Cesarean Section**

#### **Objective**

1. To determine the patient characteristics of women undergoing a trial of labor (TOL) and to determine the efficacy and safety of trial of labor.
2. To determine the cesarean delivery rates, indications for operative intervention, intrapartum patient management and outcome by payer and provider status.
3. To estimate the frequency of maternal and neonatal complications of cesarean delivery.
4. To determine factors influencing maternal and neonatal outcome in women undergoing cesarean delivery.

**Conclusion:** To be determined

#### **Publications:**

Rouse DJ, MacPherson CA, Landon M, Varner MW, Leveno KJ, Moawad AH, Spong CY, Caritis SN, Meis PJ, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Blood transfusion and cesarean delivery.** Obstet Gynecol 2006;108(4):891-897. PMID: 17012451.

Grobman WA, Gilbert S, Landon MB, Spong CY, Leveno KJ, Rouse DJ, Varner MW, Moawad AH, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Outcomes of induction of labor after one prior cesarean.** Obstet Gynecol 2007;109(2 pt 1):262-269. PMID: 17267822.

Alexander JM, Leveno KJ, Rouse DJ, Landon MB, Gilbert S, Spong CY, Varner MW, Moawad AH, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, O'Sullivan MJ, Sibai BM, Langer O, Gabbe SG. **Comparison of maternal and infant outcomes from primary cesarean delivery during the second compared with first stage of labor.** Obstet Gynecol 2007;109(4):917-921. PMID: 17400854.

Grobman WA, Lai Y, Landon MB, Spong CY, Leveno KJ, Rouse DJ, Varner MW, Moawad AH, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Development of a nomogram for prediction of vaginal birth after cesarean delivery.** *Obstet Gynecol* 2007;109(4):806-812. PMID: 17400840

Louis J, Landon MB, Gersnoviez RJ, Leveno KJ, Spong CY, Hauth JC, Moawad AH, Varner MW, Caritis SN, Harper M, Wapner RJ, Miodovnik M, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **The MFMU cesarean registry: Perioperative morbidity among HIV infected women undergoing cesarean delivery.** *Obstet Gynecol* 2007;110(2 pt 1):385-390. PMID: 17666615.

Varner MW, Thom EA, Spong CY, Landon MB, Leveno KJ, Rouse DJ, Moawad AH, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Trial of labor after one previous cesarean delivery for multifetal gestation.** *Obstet Gynecol* 2007;110(4):814-819. PMID: 17906014.

Spong CY, Landon MB, Gilbert S, Rouse DJ, Leveno KJ, Varner MW, Moawad AH, Simhan HN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Risk of uterine rupture and adverse perinatal outcome at term after cesarean delivery.** *Obstet Gynecol* 2007;110(4):801-807. PMID: 17906012.

Grobman WA, Gersnoviez R, Landon MB, Spong CY, Leveno KJ, Rouse DJ, Varner MW, Moawad AH, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Pregnancy outcomes for women with placenta previa in relation to the number of prior cesareans.** *Obstet Gynecol* 2007;110(2 pt 1):1249-1255. PMID: 17267822.

Sciscione A, Landon MB, Leveno KJ, Spong CY, MacPherson CA, Varner MW, Rouse DJ, Moawad AH, Caritis SN, Harper M, Sorokin Y, Miodovnik M, Marshall, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, and Mercer BM. **Previous preterm cesarean delivery and risk of subsequent uterine rupture.** *Obstet Gynecol* 2008;111(3):648-653. PMID: 18310367.

Mercer BM, Gilbert S, Landon MB, Spong CY, Leveno KJ, Rouse DJ, Varner MW, Moawad AH, Simhan HN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM. **Labor outcomes with increasing number of prior vaginal births after cesarean delivery.** *Obstet Gynecol* 2008;111(2 pt 1):285-291. PMID: 18238964.

Bailit JL, Landon MB, Lai Y, Rouse DJ, Spong CY, Varner MW, Moawad AH, Simhan HN, Harper, Wapner RJ, Sorokin Y, Miodovnik M, O'Sullivan MJ, Sibai BM, Langer O. **The MFMU cesarean registry: Impact of shift change on cesarean complications.** *Am J Gynecol* 2008;198(2):173. PMID: 18226616.

Grobman WA, Lai Y, Landon MB, Spong CY, Leveno KJ, Rouse DJ, Varner MW, Moawad AH, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter MW, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Prediction of uterine rupture associated with attempted vaginal birth after cesarean delivery.** *Am J Gynecol* 2008;199(1):30. PMID: 18439555. PMCID: PMC2532505.

Alexander JM, Leveno KJ, Rouse D, Landon MB, Gilbert SA, Spong CY, Varner MW, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, O'Sullivan MJ, Sibai BM, Langer O, Gabbe SG. **Cesarean delivery for the second twin.** *Obstet Gynecol* 2008;112(4):748-752. PMID: 18827115. PMCID: PMC3259682.

Grobman WA, Lai Y, Landon MB, Spong C, Leveno K, Rouse DJ, Varner MW, Moawad AH, Caritis SN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter M, O'Sullivan MJ, Sibai BM, Langer O, Thorp J, Ramin SM, Mercer BM. **Can a prediction model for vaginal birth after cesarean also predict the probability of morbidity related to a trial of labor?** *Am J Gynecol* 2009;200(1):56. PMID: 18822401. PMCID: PMC2743567.

Tita ATN, Landon MB, Spong CY, Lai Y, Leveno KJ, Varner MW, Moawad AH, Caritis SN, Meis PJ, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Timing of elective repeat cesarean delivery at term and neonatal outcomes.** N Engl J Med 2009;360(2):111-120. PMID: 19129525. PMCID: PMC2811696.

Shellhaas CS, Gilbert S, Landon MB, Varner MW, Leveno KJ, Hauth JC, Spong CY, Caritis SN, Wapner RJ, Sorokin Y, Miodovnik M, O'Sullivan MJ, Sibai BM, Langer O, Gabbe SG. **The frequency and complication rates of hysterectomy accompanying cesarean delivery.** Obstet Gynecol 2009;114(2 pt 1):224-229. PMID: 19622981. PMCID: PMC2771379.

Dinsmoor MJ, Gilbert S, Landon MB, Rouse DJ, Spong CY, Varner MW, Caritis SN, Wapner RJ, Sorokin Y, Miodovnik M, O'Sullivan MJ, Sibai BM, Langer O. **Perioperative antibiotic prophylaxis for nonlaboring cesarean delivery.** Obstet Gynecol 2009;114(4):752-756. PMID: 19888031. PMCID: PMC2863989.

Grobman WA, Lai Y, Landon MB, Spong CY, Leveno KJ, Rouse DJ, Varner MW, Moawad AH, Simhan HN, Harper M, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter M, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Ramin SM, Mercer BM. **Does information available at admission for delivery improve prediction of vaginal birth after cesarean?** Am J Perinatol 2009;26(10):693-701. PMID: 19813165. PMCID: PMC3008589

Alexander JM, Leveno KJ, Hauth JC, Landon MB, Gilbert S, Spong CY, Varner MW, Caritis SN, Meis PM, Wapner RJ, Sorokin Y, Miodovnik M, O'Sullivan MJ, Sibai BM, Langer O, Gabbe SG. **Failed operative vaginal delivery.** Obstet Gynecol 2009;114(5):1017-1022. PMID: 20168101. PMCID: PMC3075422.

Cormier CM, Landon MB, Lai Y, Spong CY, Rouse DJ, Leveno KJ, Varner MW, Simhan HN, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Mercer BM. **White's Classification of maternal diabetes and vaginal birth after cesarean delivery success in women undergoing a trial of labor.** Obstet Gynecol 2010;115(1):60-64. PMID: 20027035. PMCID: PMC2844346.

Ramirez MM, Gilbert S, Landon MB, Rouse DJ, Spong CY, Varner MW, Caritis SN, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Mercer BM. **Mode of delivery in women with antepartum fetal death and prior cesarean delivery.** Am J Perinatol 2010;27(10):825-830. PMID: 20486068. PMCID:PMC3272299.

Wylie BJ, Gilbert S, Landon MB, Spong CY, Rouse DJ, Leveno KJ, Varner MW, Caritis SN, Meis PJ, Wapner RJ, Sorokin Y, Miodovnik M, O'Sullivan MJ, Sibai BM, Langer O. **Comparison of transverse and vertical skin incision for emergency cesarean delivery.** Obstet Gynecol 2010;115(6):1134-1140. PMID: 20502282. PMCID: PMC322835

Bakhshi T, Landon MB, Lai Y, Spong CY, Rouse DJ, Leveno KJ, Varner MW, Caritis SN, Meis PJ, Wapner RJ, Sorokin Y, Miodovnik M, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Langer O, Thorp JM, Mercer BM, Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network. **Maternal and neonatal outcomes of repeat cesarean delivery in women with a prior classical versus low transverse uterine incision.** Am J Perinatol 2010;27(10):791-796. PMID: 20458666. PMCID: PMC2955172.

Grobman WA, Lai Y, Landon MB, Spong CY, Rouse DJ, Varner MW, Caritis SN, Harper M, Wapner RJ, Sorokin Y. **The change in the rate of vaginal birth after caesarean section.** Paediatr Perinat Epidemiol 2011;25(1):37-43. PMID: 21133967. PMCID: PMC3066476.

Manuck TA, Lai Y, Meis PJ, Dombrowski MP, Sibai B, Spong CY, Rouse DJ, Durnwald CP, Caritis SN, Wapner RJ, Mercer BM, Ramin SM. **Progesterone receptor polymorphisms and clinical response to 17-alpha-hydroxyprogesterone caproate.** Am J Gynecol 2011;205(2):135. PMID: 21600550 PMCID: PMC3210889.

Tita AT, Lai Y, Landon MB, Spong CY, Leveno KJ, Varner MW, Caritis SN, Meis PJ, Wapner RJ, Sorokin Y, Peaceman AM, O'Sullivan MJ, Sibai BM, Thorp JM, Ramin SM, Mercer BM. **Timing of elective repeat cesarean delivery at term and maternal perioperative outcomes.** Obstet Gynecol 2011;117(2 pt 1);280-286. PMID: 21252740. PMCID: PMC3127233.

Gyamfi-Bannerman C, Gilbert S, Landon MB, Spong CY, Rouse DJ, Varner MW, Meis PJ, Wapner RJ, Sorokin Y, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Thorp JM, Ramin SM, Mercer BM. **Effect of antenatal corticosteroids on respiratory morbidity in singletons after late-preterm birth.** *Obstet Gynecol* 2012;119(3):555-9. PMID:22353953. PMCID: PMC3338333.

Gilbert SA, Grobman WA, Landon MB, Spong CY, Rouse DJ, Leveno KJ, Varner MW, Caritis SN, Meis PJ, Sorokin Y, Carpenter M, O'Sullivan MJ, Sibai BM, Thorp JM, Ramin SM, Mercer BM. **Elective repeat cesarean delivery compared with spontaneous trial of labor after a prior cesarean delivery: a propensity score analysis.** *Am J Obstet Gynecol* 2012;206(4):311. PMID: 22464069. PMCID:PMC3337034.

Gyamfi-Bannerman C, Gilbert S, Landon MB, Spong CY, Rouse DJ, Varner MW, Caritis SN, Meis PJ, Wapner RJ, Sorokin Y, Carpenter M, Peaceman AM, O'Sullivan MJ, Sibai BM, Thorp JM, Ramin SM, Mercer B. **Risk of uterine rupture and placenta accreta with prior uterine surgery outside of the lower segment.** *Obstet Gynecol.* 2012;120(6):1332-1337. PMID: 23168757. PMCID: PMC3545277.

Gilbert SA, Grobman WA, Landon MB, Spong CY, Rouse DJ, Leveno KJ, Varner MW, Wapner RJ, Sorokin Y, O'Sullivan MJ, Sibai BM, Thorp JM, Ramin SM, Mercer BM; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Cost-effectiveness of trial of labor after previous cesarean in a minimally biased cohort.** *Am J Perinatol* 2013 Jan;30(1):11-20. PMID: 23292916. PMCID:PMC4049080.

Chiossi G, Lai Y, Landon MB, Spong CY, Rouse DJ, Varner MW, Caritis SN, Sorokin Y, O'Sullivan MJ, Sibai BM, Thorp JM, Ramin S, Mercer BM; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Timing of delivery and adverse outcomes in term singleton repeat cesarean deliveries.** *Obstet Gynecol* 2013 Mar;121(3):561-569. PMID:23635619. PMCID: PMC4066022

Gilbert SA, Grobman WA, Landon MB, Varner MW, Wapner RJ, Sorokin Y, Sibai BM, Thorp JM, Ramin SM, Mercer BM; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Lifetime cost-effectiveness of trial of labor after cesarean in the United States.** *Value Health* 2013 Sep-Oct;16(6):953-64. PMID: 24041345. PMCID: PMC3983690.

## **5. Factor V Leiden: A Prospective Observational Study of Effects of Factor V Leiden Mutation on Maternal and Perinatal Outcome**

**Objective:** To determine the incidence of pregnancy-related thromboembolism in women carrying the Factor V Leiden mutation.

**Conclusion:** Among women with no history of prior thromboembolic events, maternal heterozygous carriage of the FVL mutation is associated with a low risk of pregnancy-related venoustion is thromboembolism. Neither universal prenatal screening for the FVL mutation, nor treatment of the low-risk carrier during pregnancy is indicated treatment of the low-risk carrier during pregnancy is indicated.

### **Publications:**

Aagaard-Tillery K, Sibai BM, Spong CY, Momirova V, Wendel G, Wenstrom K, Samuels P, Cotroneo M, Moawad AH, Sorokin Y, Miodovnik M, Meis PJ, O'Sullivan MJ, Conway D, Wapner RJ. **Sample bias among women with retained DNA samples for future genetic studies.** *Obstet Gynecol* 2006;108(5):1115-1120. PMID: 17077232.

Silver RM, Zhao Y, Spong CY, Sibai B, Wendel G Jr, Wenstrom K, Samuels P, Caritis SN, Sorokin Y, Miodovnik M, O'Sullivan MJ, Conway D, Wapner RJ. **Prothrombin gene G20210. A mutation and obstetric complications.** *Obstet Gynecol* 2010;115(1):14-20. PMID: 20027028. PMCID: PMC2981703.

Horton AL, Momirova V, Dizon-Townson D, Wenstrom K, Wendel G, Samuels P, Sibai B, Spong CY, Cotroneo M, Sorokin Y, Miodovnik M, O'Sullivan MJ, Conway D, Wapner RJ; on behalf of the Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network. **Family history of venous thromboembolism and identifying factor V leiden carriers during pregnancy.** *Obstet Gynecol* 2010;115(3):521-525. PMID: 20177282. PMCID: PMC3004365.

Aggaard-Tillery K, Spong CY, Thom E, Sibai B, Wendel G Jr, Wenstrom K, Samuels P, Simhan H, Sorokin Y, Miodovnik M, Meis P, O'Sullivan MJ, Conway D, Wapner RJ. **Pharmacogenomics of maternal tobacco use: Metabolic gene polymorphisms and risk of adverse pregnancy outcomes.** *Obstet Gynecol* 2010;115(3):568-577. PMID: 20177288. PMCID:PMC3263385

Manuck T, Branch DW, Lai Y, Sibai B, Spong CY, Wendel G Jr, Wenstrom K, Samuels P, Caritis SN, Sorokin Y, Miodovnik M, O'Sullivan MJ, Conway D, Wapner RJ. **Antiphospholipid antibodies and pregnancy outcomes in women heterozygous for factor V leiden.** *J Reprod Immunol* 2010;85(2):180-185. PMID: 20439118. PMCID: PMC3018863.

Rogers BB, Momirova V, Dizon-Townson DS, Wenstrom K, Samuels P, Sabai BM, Spong CY, Caritis SN, Sorokin Y, Miodovnik M, O'Sullivan MJ, Conway DL, Wapner RJ. **Avascular villi, increased syncytial knots, and hypervascular villi are associated with pregnancies complicated by factor V leiden mutation.** *Pediatric and Developmental Pathology* 2010;13(5):341-347. PMID: 20121426. PMCID: PMC3161512

Dizon-Townson D, Miller C, Momirova V, Sibai B, Spong CY, Wendel G, Wenstrom K, Samuels P, Caritis S, Sorokin Y, Miodovnik M, O'Sullivan MJ, Conway D, Wapner RJ, Gabbe SG. **Impact of Smoking during Pregnancy on Functional Coagulation Testing.** *Am J Perinatol* 2012;29(3):225-30. PMID: 21818732. PMCID:PMC: 3770153.

## **6. HRA(High Risk Aspirin): Clinical Trial of Low-Dose Aspirin To Prevent Preeclampsia in High Risk Women**

### **Publications:**

Caritis SN, Sibai BM, Hauth J, Lindheimer MD, Klebanoff MA, Thom EA, VanDorsten P, Landon M, Paul R, Miodovnik M, Meis PJ, Thurnau GR, and the National Institute of Child Health and Human Development Network of Maternal-Fetal Medicine Units. **Low dose aspirin to prevent preeclampsia in women at high risk.** *N Engl J Med* 1998;338(11):701-705. PMID: 9494145.

Sibai BM, Lindheimer MD, Hauth J, Caritis SN, Klebanoff MA, MacPherson CA, VanDorsten P, Landon M, Paul R, Miodovnik M, Meis PJ, Dombrowski MP, for The National Institute of Child Health and Human Development Network of Maternal-Fetal Medicine Units. **Risk factors for preeclampsia, abruptio placentae, and adverse neonatal outcomes among women with chronic hypertension.** *N Engl J Med* 1998;339(10):667-671. PMID: 9725924.

Caritis SN, Sibai BM, Hauth J, Lindheimer MD, Klebanoff MA, Thom EA, VanDorsten P, Landon M, Paul R, Miodovnik M, Meis PJ, Thurnau GR, Dombrowski MP, McNellis D, Roberts J. **Predictors of preeclampsia in women at high risk.** *Am J Gynecol* 1998;179(4):946-951. PMID: 9790376.

Hauth J, Sibai BM, Caritis SN, VanDorsten P, Lindheimer MD, Klebanoff MA, MacPherson CA, Landon M, Paul R, Miodovnik M, Meis PJ, Dombrowski MP, Thurnau GR, Walsh S, McNellis D, Roberts JM. **Maternal serum thromboxane B2 concentrations do not predict improved outcomes in high-risk pregnancies in a low-dose aspirin trial.** *Am J Gynecol* 1998;179(5):1193-1199. PMID: 9822499.

Powers RW, Jeyabalan A, Clifton RG, Van Dorsten P, Hauth JC, Klebanoff MA, Lindheimer MD, Sibai B, Landon M, Miodovnik M; for the Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units Network. **Soluble fms-Like Tyrosine Kinase 1 (sFlt1), Endoglin and placental growth factor (PlGF) in preeclampsia among high risk pregnancies.** *PLoS One* 2010;5(10): e13263. PMID: 20948996. PMCID:PMC2952583.



Jeyabalan A, Powers RW, Clifton RG, Van Dorsten P, Hauth JC, Klebanoff MA, Lindheimer MD, Sibai B, Landon M, Miodovnik M. **Effect of smoking on circulating angiogenic factors in high risk pregnancies.** PLoS One 2010;5(10):e13270. PMID: 20967275. PMCID: PMC2953508.

Gammill HS, Powers RW, Clifton RG, Van Dorsten JP, Klebanoff MA, Lindheimer MD, Sibai B, Landon MB, Miodovnik M, Dombrowski M. **Does C-reactive protein predict recurrent preeclampsia? Hypertension in Pregnancy** 2010;29(4):399-409. PMID: 20701468. PMCID:PMC3339658.

## **7. LRA (Low Risk Aspirin): Randomized Trial of Low-Dose Aspirin to Prevent Preeclampsia**

**Objective:** To establish whether daily administration of low-dose (60 mg) aspirin to nulliparous obstetrical patients will decrease the incidence of preeclampsia.

**Conclusion:** The trial concluded that low-dose aspirin marginally decreased the incidence of preeclampsia among nulliparous women (4.6% vs 6.3%, p=0.05), but increased the risk of abruption placentae and did not improve overall perinatal morbidity.

### **Publications:**

Sibai BM, Caritis SN, Thom EA, Klebanoff MA, McNellis D, Rocco L, Paul RH, Romero R, Witter F, Rosen M, Depp R, for the National Institute of Child Health and Human Development Network of Maternal-Fetal Medicine Units. **Prevention of preeclampsia with low-dose aspirin in healthy, nulliparous pregnant women.** N Engl J Med 1993;329(17):1213-1218. PMID: 8413387.

Sibai BM, Gordon T, Thom EA, Caritis SN, Klebanoff MA, McNellis D, Paul R. **Risk factors for preeclampsia in healthy nulliparous women: A prospective multicenter study.** Am J Gynecol 1995;172(2 pt 1):642-648. PMID: 7856699.

Sibai BM, Caritis SN, Thom EA, Shaw K, McNellis D; for the National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network Network. **Low-dose aspirin in nulliparous women: Safety of continuous epidural block and correlation between bleeding time and maternal-neonatal bleeding complications.** Am J Gynecol 1995;172(5):1553-1557. PMID: 7755070.

## **8. ODNs: MFMU Network Registry of Obstetrical Determinants of Neonatal Survival**

**Objective:** To examine the effectiveness of using obstetrical prognostic factors to predict the survival of infants born weighing 1,000 grams or less.

**Conclusion:** The approach to obstetric management significantly influences the outcome of extremely low-birth-weight infants. Above 800 gm or 26 weeks, the OB should usually be willing to perform cesarean delivery for fetal indications. Between 22 and 25 weeks willingness to intervene results in greater likelihood of both intact survival with serious morbidity. In these cases patients and physicians should be aware of the impact of the approach to OB management and consider the likelihood of serious morbidity and mortality when formulating plans for delivery.

### **Publications:**

Bottoms S, Paul R, Iams JD, Mercer BM, McNellis D, MacPherson CA, Norman G, Jones P, Thom EA, Roberts JM, Caritis SN, Moawad AH, VanDorsten J, Hauth J, Thurnau GR, Miodovnik M, Meis PJ. **Obstetrical determinants of neonatal survival: Influence of willingness to perform cesarean delivery on survival of extremely low birth weight infants.** Am J Gynecol 1997;176(5):960-966. PMID: 9166152.

Kimberlin DF, Hauth JC, Goldenberg RL, Bottoms SF, Iams JD, Mercer BM, MacPherson CA, Thurnau GR, and the Division of Maternal-Fetal Medicine, Department of Obstet Gynecol, University of Alabama at Birmingham, and the NICHD

Network of Maternal-Fetal Medicine Units. **The effect of maternal magnesium sulfate treatment on neonatal morbidity in  $\leq 1,000$  gram infants.** Am J Perinatol 1998;15(11):635-641. PMID: 10064205.

Bottoms SF, Paul RH, Mercer BM, MacPherson CA, Roberts JM, Caritis SN, Moawad AH, VanDorsten JP, Hauth JC, Thurnau GR, Miodovnik M, Meis PJ, Roberts JM, McNellis D, Iams JD. **Obstetrical determinants of neonatal survival: Antenatal predictors of neonatal survival and morbidity in extremely low birth weight infants.** Am J Gynecol 1999;180(3 pt1):665-669. PMID: 10076145

## **9. Progesterone Trial: Randomized Clinical Trial of 17 alpha-Hydroxyprogesterone Caproate for Prevention of Preterm Birth in High Risk Women**

**Objective:** To test the hypothesis that administration of 17 alpha-hydroxyprogesterone caproate initiated before 21 weeks gestation will reduce the risk of preterm birth in women who have previously experienced an early spontaneous preterm delivery.

**Conclusion:** Weekly injections of 17 alpha-hydroxyprogesterone caproate resulted in a substantial reduction in the rate of recurrent preterm delivery.

### **Publications:**

Klebanoff MA, Meis PJ, Dombrowski MP, Zhao Y, Moawad AH, Northen A, Sibai BM, Iams JD, Varner MW, Caritis SN, O'Sullivan MJ, Leveno KJ, Miodovnik M, Conway D, Wapner RJ, Carpenter M, Mercer BM, Ramin SM, Thorp JM, Peaceman AM. **Salivary progesterone and estriol among pregnant women treated with 17-alpha-hydroxyprogesterone caproate or placebo.** Am J Gynecol 2008;199(5):506. PMID: 18456237. PMCID: PMC2794481.

Sibai B, Romero R, Klebanoff MA, Rice MM, Caritis S, Lindheimer MD, Van Dorsten JP, Landon M, Miodovnik M, Dombrowski M, Meis P. **Maternal plasma concentrations of the soluble tumor necrosis factor receptor 2 are increased prior to the diagnosis of preeclampsia.** Am J Gynecol 2009;200(6):630. PMID: 19306961. PMCID: PMC2862352

Manuck TA, Price TM, Thom E, Meis PJ, Dombrowski MP, Sibai B, Spong CY, Rouse DJ, Iams JD, Simhan HN, O'Sullivan MJ, Miodovnik M, Leveno KJ, Conway D, Wapner RJ, Carpenter M, Mercer B, Ramin SM, Thorp JM, Peaceman AM. **Absence of mitochondrial progesterone receptor polymorphisms in women with spontaneous preterm birth.** Repro Sci 2010;17(10):913-916. PMID: 20693499. PMCID: PMC3210024.

Manuck TA, Lai Y, Meis PJ, Sibai B, Spong CY, Rouse DJ, Iams JD, Caritis SN, O'Sullivan MJ, Wapner RJ, Mercer B, Ramin SM, Peaceman AM. **Admixture mapping to identify spontaneous preterm birth susceptibility loci in African Americans.** Obstet Gynecol 2011;117(5):1078-1084. PMID: 21508746. PMCID: PMC3094723.

## **10. Progesterone Follow-up: A Follow-Up Study of the Children in the Progesterone Trial**

**Objective:** To determine whether there is a difference in achievement of developmental milestones and physical health between children whose mothers received progesterone and those who received placebo in a previous MFMU Network trial.

**Conclusion:** To be determined

### **Publications:**

Northen AT, Norman GS, Anderson K, Moseley L, DiVito M, Cotroneo M, Swain M, Bousleiman S, Johnson F, Dorman K, Milluzzi C, Tillinghast J, Kerr M, Mallett G, Thom E, Pagliaro S, Anderson G. **Follow-up of children exposed in-utero to 17-alpha-hydroxyprogesterone caproate versus placebo.** Obstet Gynecol 2007;110(4):865-872. PMID: 17906021.

## **11. Steroids Trial: A Randomized Placebo-Controlled Clinical Trial of Antenatal Corticosteroid Regimens**

**Objective:** To test the hypothesis that in women < 32 weeks gestation who are at risk for spontaneous preterm delivery and who remain pregnant more than with seven days after initial corticosteroid therapy, weekly re-administration of corticosteroids will decrease neonatal morbidity compared with a single course of corticosteroids.

**Conclusion:** Repeated exposure to antenatal corticosteroids significantly reduced specific neonatal morbidities but did not improve composite neonatal outcome. This was accompanied by a reduction in birth weight and an increase in small for gestational age infants.

### **Publications:**

Sawady J, Mercer BM, Wapner RJ, Zhao Y, Sorokin Y, Johnson F, Dudley DJ, Spong CY, Peaceman AM, Leveno KJ, Harper M, Caritis SN, Miodovnik M, Thorp JM, Ramin SM, Carpenter MW, Rouse DJ for the National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network. **Beneficial effects of antenatal repeated steroids study: Impact of repeated doses of antenatal corticosteroids on placental growth and histologic findings.** Am J Gynecol 2007;197(3):281. PMID: 17826421.

Wapner RJ, Sorokin Y, Mele L, Johnson F, Dudley DJ, Spong CY, Peaceman AM, Leveno KJ, Malone F, Caritis SN, Mercer BM, Harper M, Rouse DJ, Thorp JM, Ramin SM, Carpenter MW, Gabbe SG, for the National Institute of Child Health and Development Maternal-Fetal Medicine Units Network. **Long term outcomes of a randomized trial of repeat antenatal corticosteroids.** N Engl J Med 2007;357(12):1190-1198. PMID: 17881751.

Carroll MA, Vidaeff AC, Mele L, Wapner RJ, Mercer BM, Peaceman AM, Sorokin Y, Dudley DJ, Spong CY, Leveno KJ, Harper M, Caritis SN, Miodovnik M, Thorp JM, Moawad AH, O'Sullivan MJ, Carpenter MW, Rouse DJ, Sibai BM. **Bone metabolism in pregnant women exposed to single compared with multiple courses of corticosteroids.** Obstet Gynecol 2008;111(6):1352-1358. PMID: 18515519. PMCID: PMC2810116.

Fonseca L, Ramin SM, Mele L, Wapner RJ, Johnson F, Peaceman AM, Sorokin Y, Dudley DJ, Spong CY, Leveno KJ, Caritis SN, Miodovnik M, Mercer B, Thorp JM, O'Sullivan MJ, Carpenter MW, Rouse DJ, Sibai B. **Bone metabolism in fetuses of pregnant women exposed to single and multiple courses of corticosteroids.** Obstet Gynecol 2009;114(1):38-44. PMID: 19546756. PMCID: PMC2844799.

Hashima JN, Lai Y, Wapner RJ, Sorokin Y, Dudley DJ, Peaceman A, Spong CY, Iams JD, Leveno KJ, Harper M, Caritis SN, Varner M, Miodovnik M, Mercer BM, Thorp JM, O'Sullivan MJ, Ramin SM, Carpenter M, Rouse DJ, Sibai B. **The effect of maternal body mass index on neonatal outcome in women receiving a single course of antenatal corticosteroids.** Am J Gynecol 2010;202(3):263. PMID: 20022589. PMCID: PMC2834852.

Clark EA, Mele L, Wapner RJ, Spong CY, Sorokin Y, Peaceman A, Iams JD, Leveno KJ, Harper M, Caritis SN, Miodovnik M, Mercer BM, Thorp JM, Ramin SM, Carpenter M, Rouse DJ. **Association of fetal inflammation and coagulation pathway gene polymorphisms with neurodevelopmental delay at age 2 years.** Am J Gynecol 2010;203(1):83. PMID: 20417488. PMCID: PMC2900538.

Gyamfi C, Mele L, Wapner SR, Spong CY, Peaceman A, Sorokin Y, Dudley DJ, Johnson F, Leveno KJ, Caritis SN, Mercer BM, Thorp JM Jr, O'Sullivan MJ, Ramin SM, Carpenter M, Rouse DJ, Miodovnik M, Sibai B. **The effect of plurality and obesity on betamethasone concentrations in women at risk for preterm delivery.** Am J Gynecol 2010;203(3):219. PMID: 20579955. PMCID: PMC3214971

Sorokin Y, Romero R, Mele L, Wapner RJ, Iams JD, Dudley DJ, Spong CY, Peaceman AM, Leveno KJ, Harper M, Caritis SN, Miodovnik M, Mercer BM, Thorp JM, O'Sullivan MJ, Ramin SM, Carpenter MW, Rouse DJ, Sibai B. **Maternal serum**

**interleukin-6, C - reactive protein, and matrix metalloproteinase-9 concentrations as risk factors for preterm birth <32 weeks and adverse neonatal outcomes.** Am J Perinatol 2010;27(8):631-640. PMID: 20195952. PMCID: PMC2976602.

Church MW, Wapner RJ, Mele LM, Johnson F, Dudley DJ, Spong CY, Peaceman AM, Moawad AH, O'Sullivan MJ, Miodovnik M. **Repeated courses of antenatal corticosteroids: Are there effects on the infant's auditory brainstem responses?** Neurotoxicol Teratol 2010;32(6):605-10. PMID: 20553856. PMCID: PMC2955992.

Mertz HL, Mele L, Spong CY, Dudley DJ, Wapner RJ, Iams JD, Sorokin Y, Peaceman A, Leveno KJ, Caritis SN, Miodovnik M, Mercer BM, Thorp JM, O'Sullivan MJ, Ramin SM, Carpenter M, Rouse DJ, Sibai B. **Placental endothelial nitric oxide synthase in multiple and single dose betamethasone exposed pregnancies.** Am J Gynecol 2011;204(6):545. PMID: 21529755. PMCID: PMC3146963.

Clark EA, Mele L, Wapner RJ, Spong CY, Sorokin Y, Peaceman A, Iams JD, Leveno KJ, Harper M, Caritis SN, Mercer BM, Thorp JM, Ramin SM, Carpenter M, Rouse DJ. **Repeated course antenatal steroids, inflammation gene polymorphisms and neurodevelopmental outcomes at age 2.** Am J Gynecol 2011;205(1):79. PMID: 21529753. PMCID: PMC3743532.

Morgan TK, Tolosa JE, Wapner RJ, Spong CY, Sorokin Y, Dudley DJ, Peaceman AM, Mercer BM, Thorp JM, O'Sullivan MJ, Ramin SM, Rouse DJ, Sibai B; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Placental villous hypermaturation is associated with idiopathic preterm birth.** J Matern Fetal Neonatal Med 2013 May;26(7):647-653. PMID: 23130816. PMCID: PMC4010251.

Zephyrin LC, Hong KN, Wapner RJ, Peaceman AM, Sorokin Y, Dudley DJ, Iams JD, Harper M, Caritis SN, Mercer BM, Thorp JM, Ramin SM, Rouse DJ, Sibai B; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Gestational age-specific risks vs benefits of multicourse antenatal corticosteroids for preterm labor.** Am J Obstet Gynecol. 2013 Oct;209(4):330.e1-330. PMID: 23770471. PMCID: PMC3967787.

## **12. STTARS: A Randomized Study of Seventeen Alpha-Hydroxyprogesterone Caproate in Twins and Triplets**

**Objective:** To determine whether 17 Alpha-Hydroxyprogesterone prevents preterm birth in multifetal pregnancies.

**Conclusion:** Treatment with 17 Alpha-Hydroxyprogesterone caproate did not reduce the rate of preterm birth in women with multigestations.

### **Publications:**

Rouse DJ, Caritis SN, Peaceman AM, Sciscione A, Thom EA, Spong CY, Varner MW, Malone F, Iams JD, Mercer BM, Thorp JM, Sorokin Y, Carpenter MW, Lo J, Ramin SM, Harper M, Anderson G. **A trial of 17 alpha-hydroxyprogesterone caproate to prevent prematurity in twins.** N Engl J Med 2007;357(5):454-461. PMID: 17671253.

Caritis SN, Rouse DJ, Peaceman AM, Sciscione A, Momirova V, Spong CY, Iams JD, Wapner RJ, Varner MW, Carpenter M, Lo J, Thorp J, Mercer BM, Sorokin Y, Harper M, Ramin S, Anderson G. **Prevention of preterm birth in triplets: An evaluation of 17-alpha-hydroxyprogesterone caproate.** Obstet Gynecol 2009;113(2 pt 1):285-292. PMID: 19155896. PMCID: PMC2790283.

Gyamfi C, Horton AL, Momirova V, Rouse DJ, Caritis SN, Peaceman AM, Sciscione A, Meis PJ, Spong CY, Dombrowski M, Sibai B, Varner MW, Iams JD, Mercer BM, Carpenter MW, Lo J, Ramin SM, O'Sullivan MJ, Miodovnik M, Conway D. **The effect of 17-alpha-hydroxyprogesterone caproate on the risk of gestational diabetes in singleton or twin pregnancies.** Am J Gynecol 2009;201(5):392. PMID: 19716543. PMCID: PMC2759383.

Refuerzo JS, Momirova V, Peaceman AM, Sciscione A, Rouse DJ, Caritis SN, Spong CY, Varner MW, Malone FD, Iams JD, Mercer BM, Thorp JM, Sorokin Y, Carpenter MW, Lo J, Harper M. **Neonatal outcomes in twin pregnancies delivered moderately preterm, late preterm, and term.** Am J Perinatol 2010;27(7):537-542. PMID: 20175042. PMCID: PMC2990398.

Durnwald CP, Momirova V, Rouse DJ, Caritis SN, Peaceman AM, Sciscione A, Varner MW, Malone FD, Mercer BM, Thorp JM, Sorokin Y, Carpenter MW, Lo J, Ramin SM, Harper M, Spong CY. **Second trimester cervical length and risk of preterm birth in women with twin gestations treated with 17-alpha hydroxyprogesterone caproate.** Journal of Maternal-Fetal and Neonatal Medicine 2010;23(12):1360-1364. PMID: 20441408. PMCID: PMC2999406.

Caritis SN, Sharma S, Venkataramanan R, Rouse DJ, Peaceman AM, Sciscione A, Spong CY, Varner MW, Malone FD, Iams JD, Mercer BM, Thorp JM Jr, Sorokin Y, Carpenter M, Lo J, Ramin S, Harper M. **Pharmacokinetics of 17-hydroxyprogesterone caproate in multifetal gestation.** Am J Gynecol 2011;205(1):40. PMID: 21620357. PMCID: PMC3165062.

Caritis SN, Simhan HN, Zhao Y, Rouse DJ, Peaceman AM, Sciscione A, Spong CY, Varner MW, Malone FD, Iams JD, Mercer BM, Thorp JM Jr, Sorokin Y, Carpenter M, Lo J, Ramin SM, Harper M. **Relationship between 17-hydroxyprogesterone caproate concentrations and gestational age at delivery in twin gestation.** Am J Obstet Gynecol 2012;207(5):396. PMID: 22959763. PMCID:PMC3484214.

Bodnar LM, Rouse DJ, Momirova V, Peaceman AM, Sciscione A, Spong CY, Varner MW, Malone FD, Iams JD, Mercer BM, Thorp JM Jr, Sorokin Y, Carpenter MW, Lo J, Ramin SM, Harper M; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. **Maternal 25-hydroxyvitamin D and preterm birth in twin gestations.** Obstet Gynecol. 2013 Jul;122(1):91-98. PMID: 23743453. PMCID: PMC3706065.