First recognized by the American Board of Obstetrics and Gynecologists in 1973, the subspecialty of Maternal-Fetal Medicine (MFM) grew from a need to care for increasingly complicated pregnancies and from emerging technologies that provided greater opportunity to evaluate and treat problems involving the fetus.

MFM subspecialists are the leaders in high-risk obstetric care and serve as consultants to other obstetric care providers. With additional years of subspecialty training after completion of residency, MFM subspecialists have advanced knowledge of the medical, surgical, obstetrical, fetal and genetic complications of pregnancy and their effects in both the mother and the fetus. The MFM subspecialist provides peer and patient education and performs research developing the most innovative approaches and treatments for obstetrical problems, thus promoting risk-appropriate care for complicated pregnancies.

This 2nd edition of the SMFM Monograph is an updated and user-friendly guide to provide a clear understanding of the role of the MFM subspecialist. It offers examples of the kinds of patients cared for by MFM subspecialists and enclosed inserts augment this general information with topic-specific details. This monograph also highlights the important research that has emerged to improve the optimization of pregnancy and perinatal outcomes. Further information is available at www.smfm.org.

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Maternal-fetal medicine (MFM) subspecialists have advanced knowledge of the medical, surgical, obstetrical, fetal and genetic complications of pregnancy and their effects on both the mother and fetus. MFM subspecialists are complementary to obstetric care providers in providing consultations, co-management, or transfer of care for complicated patients before, during and after pregnancy. The MFM subspecialist provides peer and patient education and performs research concerning the most recent approaches and treatments for obstetrical problems, thus promoting risk-appropriate care for these complicated pregnancies.

An MFM subspecialist is an obstetrician-gynecologist who has completed 2-3 years of additional formal education and clinical experience within an American Board of Obstetrics and Gynecology (ABOG) approved MFM Fellowship Program and is eligible for or certified by ABOG as having a special competency in: 1) the diagnosis and treatment of women with complications of pregnancy; 2) preexisting medical conditions which may be impacted by pregnancy; and 3) medical conditions which impact the pregnancy itself. In addition, the American Osteopathic Board of Obstetrics and Gynecology (AOBOG) confers subspecialty certification in MFM to physicians who have primary certification in obstetrics and gynecology, have successfully completed a three year fellowship and research requirements, and have passed the subspecialty clinical examination. MFM subspecialists have the specific training and experience needed to perform complex diagnostic and therapeutic procedures during pregnancy that can involve the fetus and/or mother, such as targeted ultrasound or fetal intravascular transfusions. An MFM subspecialist requires advanced knowledge of the obstetrical, medical, surgical, obstetric, fetal and genetic complications of pregnancy and their effects on both the mother and fetus. Advanced knowledge of neonatal adaptation is also necessary to ensure a continuum of care from the fetal to the neonatal periods. Furthermore, the MFM subspecialist has the training and expertise to evaluate prior adverse pregnancy outcomes in order to try to improve subsequent pregnancy outcomes, as well as the lifelong effects on the mother. Lastly, the MFM subspecialist provides peer and patient education and performs research concerning the most recent approaches and treatments for obstetrical problems, thus promoting risk-appropriate care for these complicated pregnancies.

The training and experience acquired by obstetric care providers may allow them to manage certain difficult pregnancies. MFM subspecialists are complementary to such obstetric care providers in providing consultations, co-management or direct care for complicated patients (see Table 1) before, during and after pregnancy. The relationship between the obstetric care provider and the MFM subspecialist depends on the acuity of the maternal and/or fetal condition and the local resources. The discipline of MFM involves several pregnancy-related aspects, including: preconception care for women with medical or genetic risk factors or prior adverse pregnancy outcomes; antepartum care for pregnancies with medical, surgical, obstetric or fetal complications; labor and delivery and associated complications; obstetric complications; maternal medical complications; fetal evaluation for anomalies; fetal testing; gynecologic issues related to pregnancy and postpartum care and its complications (Table 1).

As with other obstetric care providers, the MFM subspecialist also provides education and research within the field concerning the most recent approaches and treatments for obstetrical problems. An MFM subspecialist can help promote and deliver optimal and evidence-based care for these complicated pregnancies.
THE SOCIETY FOR MATERNAL-FETAL MEDICINE (SMFM) was established in 1977 to give MFM subspecialists and scientists a place to share knowledge, research and clinical best practices in order to improve maternal and child outcomes. SMFM’s membership of about 2,500 physicians and scientists is dedicated to the optimization of pregnancy and perinatal outcomes. SMFM’s mission is to improve maternal and child outcomes, raising the standards of prevention, diagnosis, and treatment of maternal and fetal disease through: support for the clinical practice of maternal-fetal medicine; research; education/training; advocacy; health policy leadership. Since 1980 the Society has annually hosted educational meetings at which peer-reviewed research and postgraduate courses in the area of maternal-fetal medicine are presented.

SMFM collaborates with three affiliated organizations to improve care for mothers and babies: The Pregnancy Foundation, the Perinatal Quality Foundation and the Association for Maternal Fetal Medicine Management (AMFMM).

THE PREGNANCY FOUNDATION (formerly the SMFM Foundation) was created to support the development of research and clinical skills in Maternal-Fetal Medicine. The Foundation receives support from SMFM Members, Corporate Council, and patients in order to support fundamental research in Maternal-Fetal Medicine and develop cutting edge clinical skills of Maternal-Fetal Medicine subspecialists.

THE PERINATAL QUALITY FOUNDATION seeks to improve the quality of Maternal-Fetal Medicine medical services by providing state of the art educational programs, and evidence-based, statistically valid monitoring systems to evaluate current practices and facilitate the transition of emerging technologies into clinical care. The foundation is committed to disseminating safe and excellent obstetrical practice protocols, and to providing clinician and provider education, monitoring measures, and consensus discussions on emerging obstetrical technologies. Programs include cervical length education and review, nuchal translucency quality review and fetal monitoring credentialing.

THE ASSOCIATION FOR MATERNAL FETAL MEDICINE MANAGEMENT (AMFMM) is a 501(c) 6 nonprofit established in 2008 as a Professional Group of SMFM. AMFMM is dedicated to improving the art and science of MFM practice management in an efficient and effective manner. AMFMM’s mission is to create an environment that facilitates individual and organizational learning between managers and physicians that enriches the MFM patient experience while enhancing the MFM business value.

SMFM Publications

To pursue the mission and to reach the vision to lead the global advancement of women’s and children’s health through pregnancy care, research, advocacy and education, SMFM publishes branded peer-reviewed manuscripts which provide clinical, research and technical information, as well as practice recommendations regarding maternal-fetal medicine topics that are accessible to MFM subspecialists and other obstetric care providers including obstetrician-gynecologists, obstetric-gynecologic hospitals, family physicians, certified nurse midwives/ certified midwives, nurse practitioners, physician assistants; as well as those in training programs. The various publications include the followings: SMFM Clinical Guideline series; SMFM Consult series; joint ACOG-SMFM Ob Care Consensus series; and various “White Papers” and SMFM Statements developed by SMFM committees that offer specific guidance regarding technical topics related to issues such as practice management, coding and billing and quality of care. SMFM also jointly publishes and endorses other documents with outside organizations like ACOG and AIUM. All current SMFM publications can be found at: www.smfm.org/publications.

SMFM Outreach and Collaboration: Health Policy and Government Relations

SMFM advances public policy related to maternal and child health in collaboration with many partners both in the U.S. and globally. Several years ago, SMFM made a conscious effort to reach out to like-minded organizations and federal agencies to achieve mutual research, clinical practice and public policy goals. The result of the Society’s efforts has been collaboration with various entities that has lead to improved care, better outcomes and greater awareness of issues surrounding maternal and fetal medicine specialists and our patients. These collaborative efforts have been woven into SMFM’s government relations and health policy committees’ agendas, and have placed SMFM at the forefront of women’s health efforts in Washington, DC.
SMFM’s focus on women’s health policy and research has lead to several breakthrough discoveries and improvements in clinical practice. SMFM has long collaborated with the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). Many of SMFM’s members are the leading pregnancy researchers in the country, are funded by NICHD grants and participate in the Maternal Fetal Medicine Units Network (MFMU) among other NICHD initiatives. MFMU was founded in 1986 to focus on “clinical questions in maternal-fetal medicine and obstetrics, particularly with respect to the continuing problem of preterm birth.” The Network allows researchers from across the country to coordinate their work and share data. This Network conducts clinical studies, with an emphasis on randomized controlled trials, to improve maternal, fetal and neonatal health. As a result of this work several important discoveries have been made that improve the care of pregnant women and fetuses. For instance, an MFMU Network clinical trial showed that a progestin treatment resulted in a substantial reduction in the rate of preterm delivery among women who had a previous preterm birth, reduced the risk of newborn complications, and was effective in both African American and Non-African American women. Additionally, because past studies have suggested a possible association between magnesium sulfate administration and a reduced chance of cerebral palsy, the MFMU Network conducted the largest, most comprehensive trial to date to test whether magnesium sulfate given to a woman in labor with a premature fetus (24 to 31 weeks of gestation) would result in a reduction in cerebral palsy. The MFMU Network also provided the first conclusive evidence that treating pregnant women who have even the mildest form of gestational diabetes can reduce the risk of common birth complications among infants, as well as blood pressure disorders among mothers. These findings have changed clinical practice and are leading to better outcomes for both mothers and babies.

In 2011, SMFM joined the National Quality Forum (NQF), an organization based in Washington, DC whose mission is to “build consensus on national priorities and goals for performance improvement and working in partnership to achieve them; endorse national consensus standards for measuring and publicly reporting on performance; and promote the attainment of national goals through education and outreach programs.” Several SMFM members were appointed to the NQF Perinatal Steering Committee, the entity tasked with examining and ultimately endorsing groups of perinatal quality measures that could then be incorporated into federal quality improvement programs as well as used in hospitals and by private payers. MFM subspecialists provided the necessary expertise to ensure that all perinatal quality metrics that are endorsed by NQF make sense and can be realistically implemented as well as lead to improvement in care.

As a result of its involvement with NQF and outreach to leadership, SMFM was then invited to participate in the NQF-convened U.S. Department of Health and Human Services-funded National Priorities Partnership (NPP) Maternity Action Team. SMFM joined nearly 30 public and private stakeholder organizations to help develop a way to address inappropriate maternity care, specifically focusing on early elective deliveries and reducing cesarean section in low-risk women. By identifying appropriate quality measures and ensuring implementation of those measures, the Maternity Action Team has worked, with SMFM’s input, to share best practices and encourage collaboration in the area of maternity care. Realizing that SMFM could continue to find ways to improve clinical practice every day, and responding to concerns of practitioners about implementation of electronic medical records (EMRs), in early 2014 SMFM convened a group of EMR vendors, physician and health care professional societies as well as others to form the Obstetric Health Information Initiative (OHII). Beginning with a workshop at the Pregnancy Meeting, SMFM lead a discussion that brought together users of health information technology (HIT) and those who make it to truly improve care. As the convener of the initial dialogue, SMFM’s goals are to ensure that all EMRs include feasible, uniform information and opportunity to provide the best and most efficient care for patients.

http://www.qualityforum.org/About_NQF/Mission_and_Vision.aspx
Education, Awareness and Advocacy

SMFM works to spread the message of high-risk pregnancy and be the voice for all MFM's. The Society leverages its policy positions and engages in government relations activities that will further advance its policy goals. In that effort, SMFM hosts Congressional briefings to raise awareness of federally-funded research related to pregnancy, on the role of the professional societies and their guidelines with respect to federal public health strategies, and to educate Members of Congress and their staff on the role of the MFM subspecialist within the public health space.

There is strength in numbers, and the message of what is needed to address the public health needs of pregnant women is only as strong as its messengers. SMFM has for many years held a seat on the Executive Committee of the Friends of NICHD, holding the seat of Chair in 2013 and 2014. The Friends is the advocacy coalition dedicated to ensuring that the NICHD receives the highest possible federal funding level from Congress and to educate and raise awareness of the important work being conducted at the NICHD. SMFM’s government relations activities also include participating in national efforts aimed at increased federal funding for biomedical research, public health and surveillance programs that improve the health of pregnant women and their babies, and to educate policymakers - members of Congress, their staff and other federal officials in the Executive Branch - on SMFM and issues surrounding high risk pregnancy.

As the political environment becomes more difficult to navigate, SMFM was successful in helping to pass the PREEMIE Reauthorization bill, which was signed into law in early 2014. This bill reauthorized federal funding for biomedical research, public health and surveillance programs that improve the health of pregnant women and their babies, and to educate policymakers - members of Congress, their staff and other federal officials in the Executive Branch - on SMFM and issues surrounding high risk pregnancy.

SMFM's Health Policy Committee, created in 2011, has written several important published papers since the committee’s inception on the long-term implications of cesarean delivery, women’s health and the Affordable Care Act (ACA) and a proposed revision to the CONSORT guidelines for research pertaining to obstetrics. The committee has also contributed to a health policy series that has addressed the history of women’s health in the U.S. Food and Drug Administration as well as the ACA. These important publications will help guide SMFM policy positions in the future and guide overarching policy discussions at the federal level.

In 2012 SMFM began working closely with HRSA’s Maternal and Child Health Bureau to put the “M” back in “Maternal-Child Health.” There are several initiatives that SMFM has partnered with HRSA on, including the CoIIN (Collaborative Improvement & Innovation Network to Reduce Infant Mortality) initiative, working toward a national goal to reduce elective delivery at less than 39 week of gestation; expand access to interconception care through Medicaid, promote smoking cessation among pregnant women; promote infant safe sleep practices; and improve perinatal regionalization.

SMFM also has a longstanding relationship with the Centers for Disease Control and Prevention (CDC), as they provide public health surveillance, work to identify the causes of birth defects and developmental disabilities and promote the health and well being of US citizens. SMFM works most closely with the National Center on Birth Defects and Developmental Disabilities (NCBDDD) and Division of Reproductive Health. SMFM has played key roles with respect to CDC’s work on pre-term birth, pregnancy-related complications and death as well in providing input to CDC as they develop a program aimed at drugs used during pregnancy.

By reaching out and collaborating with other like-minded non-governmental organizations such as ACOG, March of Dimes, the Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN), and the Association for Maternal Child Health Programs (AMCHP), among others, SMFM is able to ensure that those who treat high-risk pregnancies are providing the best quality care to those patients who need it most. Recent efforts include collaboration with ACOG on the work of the National Maternal Safety Initiative to identify maternal safety bundles. These bundles, with input from the American Hospital Association, are now being implemented in practice settings nationwide.

Additionally, each year the March of Dimes sponsors an award for Best Research in Prematurity of SMFM’s Pregnancy Meeting, and SMFM works closely with the March of Dimes in Washington DC to support federal policies aimed at reducing prematurity.

As an example of SMFM’s outreach in action, SMFM invited Text4Baby and the National Health Mothers Healthy Babies Coalition to meet with its leadership to find ways to work together. What resulted was a partnership where SMFM provided feedback to Text4Baby, the first mobile information service designed to promote maternal and child health through text messaging.
Vision for the Future
SMFM focused over the last few years on outreach and collaboration, and the fruits of these efforts can be seen as the Society’s involvement in major national initiatives aimed at improving care and outcomes for pregnant women. SMFM is building on its success and will continue to advocate for federally funded research as well as privately funded research. The Society will build on its efforts with COIIN and the Maternity Action Team to promote the best quality care for patients, and will take its efforts even further by working together to help ensure that drugs are safe and effective in pregnancy and during lactation.
SMFM is distinguishing itself as the voice of not only MFM subspecialists, but also of women with high-risk pregnancies.
SMFM’s vision for the future includes leading the effort to ensure that “pregnancy as a window to future health” is a public policy issue that gets national attention so that conditions or health issues that arise during pregnancy are followed up on post-pregnancy and beyond the postpartum timeframe so that women can lead healthier lives.

To continue its strong record of improving outcomes and care by using advocacy and education, SMFM has developed an Advocacy Fellowship to build a leadership pipeline on the Government Relations (GR) Committee and engage more actively newer members of the Society who are interested in GR. As part of this, SMFM has developed an Advocacy Guidebook for members so that anyone can learn more about advocacy and how to be an effective advocate. SMFM is also leading the way for an effort to improve information on drugs that women may need during pregnancy and lactation. With more women of advanced maternal age getting pregnant and the increasing rates of chronic disease in the general population, there is very little information about the types of drugs for chronic conditions such as diabetes, depression or asthma among others. SMFM is working to gather interested organizations and federal agencies to engage in a collaborative effort to ensure that the effect of these types of drugs in pregnancy and lactation is known. This enormous public health initiative will result in increased knowledge, improved outcomes and healthier mothers and babies.
The past five years for SMFM have been a time of tremendous growth and opportunity. By positioning itself as a convener, collaborator and the expert voice for high risk pregnancy, SMFM has built relationships with various likeminded organizations and played an integral part in federal initiatives that will improve the care of mothers and babies, and ultimately lead to improved clinical practice and scientific breakthroughs. The future holds even greater endeavors for SMFM as it continues its policy work, drive dialogue, advocate for its members and patients, and build on a history of collaboration.

Acknowledgments
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Bibliography & Links
Articles, text and websites used in the preparation of this monograph can be found at www.smfm.org.
The practice of medicine continues to evolve, and individual circumstances will vary. This opinion reflects information available at the time of publication and is neither designed nor intended to establish an exclusive standard of perinatal care. This publication is not expected to reflect the opinions of all members of the Society for Maternal-Fetal Medicine.
The discipline of maternal-fetal medicine includes preconception care, specialized prenatal care and intrapartum care, obstetric and medical complications of pregnancy, diagnosis and management of fetal anomalies, fetal complications and fetal testing. Within this scope of practice, it is recommended that, when consultation with a maternal-fetal medicine subspecialist is needed that the obstetric care provider consults with the subspecialist as soon as the condition is identified. It is recognized that the training and experience acquired by obstetric care providers may allow them to manage some complicated pregnancies. Some items listed below may not constitute high-risk conditions [e.g. breastfeeding, contraception], but are part of the continuum of care provided by maternal-fetal medicine subspecialists as well as other obstetric care providers.

TABLE 1: SCOPE OF MATERNAL-FETAL MEDICINE

<table>
<thead>
<tr>
<th>LABOR AND DELIVERY AND ASSOCIATED COMPLICATIONS</th>
<th>OBSTETRIC COMPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any antepartum patient admitted for “other than delivery” support for intrapartum care including before labor, first- and second-stage issues, intrapartum fetal monitoring; anesthesia and analgesia: operative vaginal delivery, cesarean delivery; trial of labor after cesarean</td>
<td>1. Recurrent pregnancy loss</td>
</tr>
</tbody>
</table>

### PRECONCEPTION CARE
Preconception evaluation of women to optimize maternal and perinatal care outcomes.
- Examples include women with underlying illnesses, previous adverse pregnancy outcome, or considering advanced reproductive technology.

### SPECIALIZED PRENATAL CARE
1. Evaluation of pregnant women needing counseling regarding preconatal care issues, and nutrition
2. Ultrasound – standard, limited and specialized (e.g. detailed sonography, fetal echocardiogram, Doppler studies)
3. Prenatal diagnosis, aneuploidy screening and fetal therapy (CVS, amniocentesis, fetal blood sampling and transfusion, fetal therapeutics and thoracoamniotic shunt placement, fetal vesicocentesis and vesicoamniotic shunt placement, laser, fetal surgery)
4. Genetic screening for women at increased risk for genetic disorders

### LABOR AND DELIVERY
- Hypertensive disorders
- Cardiac disease
  - Congenital heart disease
  - Arrhythmias
  - Valve disease
- Cardiomyopathy
- Pulmonary hypertension
- Coronary artery disease
- Heart transplant
- Respiratory disease
  - Asthma
  - Pneumonia
- Gastrointestinal disease
  - Generalized/intestinal complications
  - Pancreatitis
  - Ductus venosi
  - Pancreatic disease
  - Acute fatty liver of pregnancy
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### MATERNAL COMPLICATIONS
1. Maternal mortality
2. Complications of labor and delivery
3. Preeclampsia/eclampsia with severe hypertension
4. Placenta accreta, increta, percreta
5. Second- or third-trimester vaginal bleeding
6. Intrapartum fetal monitoring
7. Amniotic fluid embolism
8. Severe postpartum hemorrhage
9. Cesarean hysterectomy
10. Puerperal sepsis
11. Septic shock

### OBSTETRIC COMPLICATIONS
1. Recurrent pregnancy loss
2. PTB prevention
   - Asymptomatic (e.g. prior second trimester loss, possible cervical insufficiency; prior PTB, Mullenian abnormalities; short cervical length; issues related to cerclage, pesasay, progesterone, or other interventions for prevention of PTT)
3. Symptomatic (PTL or PPROM) <34 weeks gestation
4. Mecronium complications
5. Malpresentation and malposition
6. Shoulder dystocia
7. Abnormal third stage of labor
8. Placenta accreta, increta, percreta
9. Second- or third-trimester vaginal bleeding
10. Preeclampsia with severe elements/eclampsia with HELLP syndrome or end-organ damage
11. Severe postpartum hemorrhage
12. Cesarean hysterectomy
13. Acute fatty liver of pregnancy
14. Amniotic fluid embolism

### COMPLICATIONS OF LABOR AND DELIVERY
- Hypertensive disorders
- Cardiac disease
  - Congenital heart disease
  - Arrhythmias
  - Valve disease
- Cardiomyopathy
- Pulmonary hypertension
- Coronary artery disease
- Heart transplant
- Respiratory disease
  - Asthma
  - Pneumonia
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11. Severe postpartum hemorrhage
12. Cesarean hysterectomy
13. Acute fatty liver of pregnancy
14. Amniotic fluid embolism
7. Hematologic diseases
   a. Maternal anemia and hemoglobinopathies
   b. Sickle cell disease
   c. von Willebrand disease
   d. Thrombotic thrombocytopenia purpura/hemolytic uremic syndrome
   e. Care of the Jehovah’s Witness pregnant woman
8. Renal disease (includes renal transplantation)
9. Neurologic diseases:
   a. Seizure disorders
   b. Headache
   c. AVM malformation/berry aneurysm
   d. Multiple sclerosis
   e. Pseudotumor cerebri
   f. Myasthenia gravis
   g. Spinal cord injury
   h. Diabetes insipidus
10. Psychosocial issues and abuse
    a. Smoking
    b. Alcohol abuse
    c. Drug abuse
    d. Depression
    e. Other psychiatric disorders
    f. Domestic violence
11. Rheumatologic disorders
    a. Antiphospholipid syndrome
    b. Systemic lupus erythematosus
    c. Rheumatoid arthritis
    d. Other autoimmune disease
12. Thromboembolic disorders
    a. Venous thromboembolism and anticoagulation
    b. Inherited thrombophilia
13. Infectious Disorders
    a. Hepatitis A
    b. Hepatitis B
    c. Hepatitis C
    d. HIV
    e. Gonorrhea
    f. Chlamydia
    g. Syphilis
    h. Trichomonas
    i. Group B streptococcus
   j. Vaccination concerns
   k. Pyelonephritis
   l. Management of wound infection
14. Trauma and Critical Care
    a. Trauma
    b. Critical care
15. Skeletal connective tissue
    a. Marfan syndrome
    b. Maternal skeletal dysplasia
16. Dermatoses
17. Cancer before and during pregnancy
18. Nonobstetric abdominal surgery in the current pregnancy

FETAL ANOMALIES
1. Structural abnormalities
2. Family history of abnormality
3. Aneuploidy or increased risk for aneuploidy
4. Teratogen exposure

FETAL COMPLICATIONS
1. Threatened miscarriage
2. Multifetal pregnancies (including medical and surgical management)
3. Growth disorders
   a. Growth restriction
   b. Macrosomia
4. Infections (e.g., Cytomegalovirus, toxoplasmosis, parovirus, Herpes, varicella)
5. Fetal death
6. Hemolytic disease (Red cell alloimmunization)
7. Neonatal alloimmune thrombocytopenia
8. Non-immune hydrops

FETAL TESTING
1. Antepartum fetal monitoring
2. Sonographic assessment of amniotic fluid abnormalities
   a. Oligohydramnios
   b. Hydramnios
3. Fetal blood sampling/intrauterine transfusion
4. Screening for fetal anemia
5. Fetal muscle/organ biopsy
6. Fetal skin sampling
7. Fetal surgery: fetoscopy/embryoscopy

GYNECOLOGIC ISSUES RELATED TO PREGNANCY AND THEIR IMPACT ON PREGNANCY
1. History of infertility
2. The adnexal mass

POSTPARTUM CARE
Postpartum care, breastfeeding, contraception, and complications such as severe hemorrhage, refractory infections, complicated preeclampsia, eclampsia and difficult postcesarean complications

AV, arterio-venous; CVS, chorionic villus sampling; HIV, human immunodeficiency virus; PPROM, preterm premature rupture of membranes; PTB, preterm birth; PTL, preterm labor.
