

## Prematurity: Prevention and Management

### Objectives

- Identify predictive tests for preterm birth
- Describe the pharmacologic characteristics of tocolytic drugs
- Discuss management of preterm birth for women with and without a history of preterm birth
- Overview progestin prophylaxis mechanisms for the prevention of preterm birth

### Content Outline

1. Predictive Tests for Preterm Birth for Singletons and Multiple Pregnancies
  - A. Cervical length measurement
  - B. Biomarkers
    1. Fibronectin testing
    2. Inflammatory markers and cytokines
    3. Vaginal microbiome DNA sequencing
2. Tocolytic Drug Pharmacologic Characteristics (Pharmacokinetics, Efficacy & Maternal/Fetal Side Effects)
  - A. Cox inhibitors
  - B. Betamimetics
  - C. Calcium channel blockers
  - D. Magnesium sulfate
  - E. Oxytocin receptor antagonists
  - F. Nitric oxide
  - G. Progesterone
    - a. Prophylaxis
      1. Mechanism
      2. Role of inflammatory stressors
      3. P4/PR signaling
    - B. Selective PR modulators
3. Management of Preterm Birth
  - A. Women with no history of preterm birth
  - B. Women with a history of preterm birth

### Reading Material Resources

**Module WB2214: Prematurity: Prevention and Management** is based on the resources listed below. A copy of each resource is included with the module.

The prediction of preterm delivery: What is new? Suff, et al., *Seminars in Fetal and Neonatal Medicine*, 24 (2019), 27-32

Drugs for the Treatment and Prevention of Preterm Labor, Patel et al., *Clinics in Perinatology*, 45 (2019), 159-172

Progestin therapy to prevent preterm birth: History and effectiveness of current strategies and development of novel approaches, Mesiano, et al., *Placenta*, (2019), 46-52