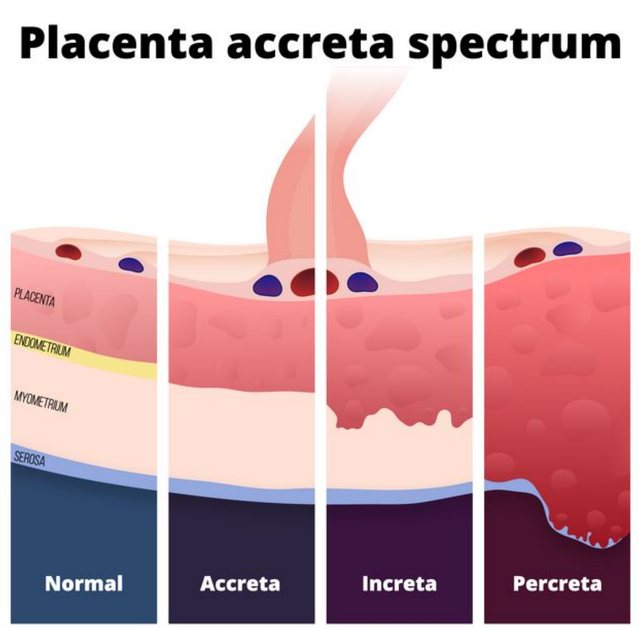
Preoperative Risk Stratification in Suspected Placenta Accreta Spectrum

University of California, San Francisco Departments of Anesthesiology & Perioperative Care and Maternal & Fetal Medicine
Emily M Boyd MD, Megan M Lobel MD, Arianna Cassidy MD, Pedram Aleshi MD

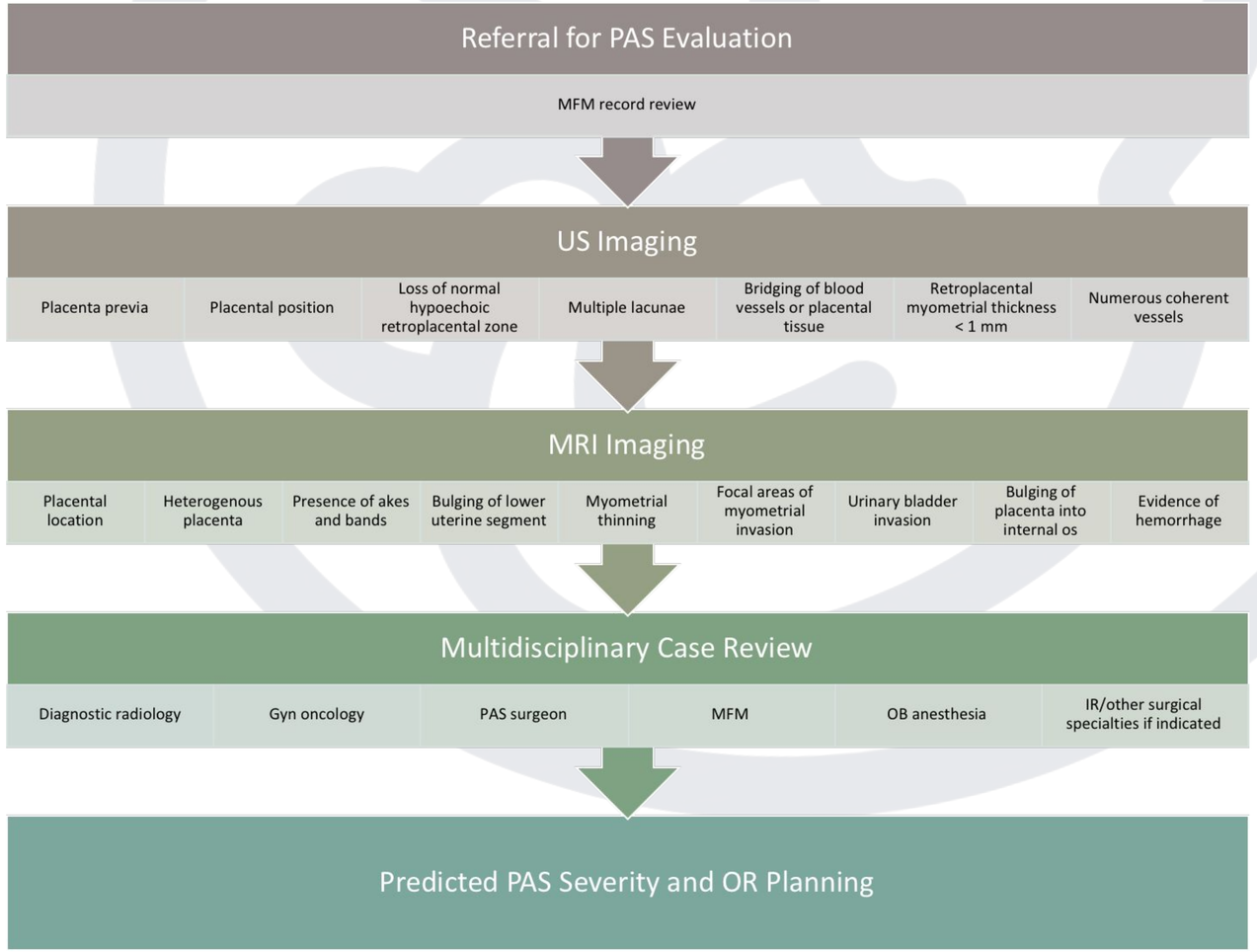
Background & Hypothesis

- Placenta accreta spectrum (PAS): pathologic adherence of the placenta to the uterine wall
- ~1/313 cesarean deliveries
- Associated with increased maternal morbidity and mortality
  - Severe hemorrhage, coagulopathy, shock
- Hypothesis: Structured multidisciplinary preoperative risk stratification integrating imaging and clinical factors predicts perioperative complications and guides anesthetic planning



Study Design & Methods

- Created standardized protocol for evaluation and management of patients with suspected PAS
- Patients with established risk factors referred for evaluation
  - Prior cesarean, prior uterine procedures, placenta previa
- Performed secondary analysis of a retrospective cohort between 2018-2022
- Primary outcome: composite of adverse maternal outcomes
  - Hemorrhage, intraoperative transfusion, postoperative ICU admission
- Secondary outcomes: individual adverse events, EBL, units transfused



Results

- 76 patients underwent structured multidisciplinary preoperative risk stratification
  - High suspicion (≥ moderate): n=51 (67%) | Low suspicion: n=25 (33%)
- High suspicion group: significantly increased risk of adverse perioperative outcomes
  - Composite adverse outcomes: aOR 8.65 (95% CI 1.65–45.30)
  - Major hemorrhage: aOR 13.50 (95% CI 2.32–78.58)
  - Intraoperative transfusion: aOR 4.91 (95% CI 1.17–20.60)
  - Greater transfusion volume: median 2 vs 0 units (p=0.004)

Conclusion & Discussion

- PAS risk stratification predicts perioperative complications and guides anesthetic planning
- High-suspicion designation informs anesthetic preparedness:
  - Vascular access
  - Blood preparation
  - Anesthetic approach
  - Patient counseling
- Future: Structured risk stratification should drive a standardized anesthetic protocol

References:
1. Front Surg 2024;11:1347549
2. Obstet Gynecol 2018;132:e259–75