

A pregnant woman with curly hair, wearing a white hospital gown with a small pattern, is looking down at her belly. The background is a soft-focus hospital room.

Perinatal Ultrasound Case Presentation

# A Vessel Runs Through It.

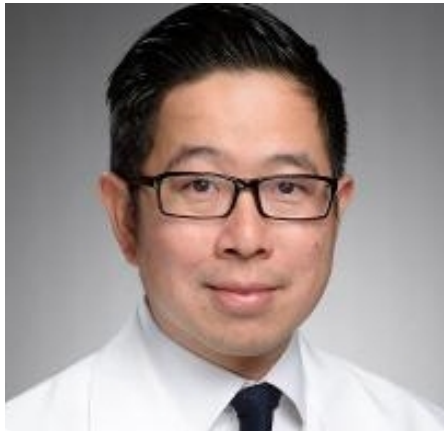
Alex Fong, M.D.

REFRESHED June 2019

Thomas J. Garite, MD. Director of Research and Education, MEDNAX National Medical Group.

Ultrasound images courtesy of:

Alex Fong, MD. Magella Medical Group, Long Beach, CA. (USA)



## Alex Fong M.D.

### **Resume:**

Alex Fong, MD obtained his medical degree at the Feinberg School of Medicine at Northwestern University, completed residency at Cedars-Sinai Medical Center, and underwent Maternal-Fetal Medicine fellowship at University of California, Irvine.

His clinical research includes labor management, gestational diabetes, and pregnancy outcome database research. He enjoys mentoring fellows and residents. He lives in Irvine, California with his wonderful wife and two beautiful daughters.

# Learning Objectives

---

Following the completion of this educational activity:



- The learner should be able to identify sonographic features associated with diagnosis.
- The learner should be able to state associated risk factors for this diagnosis.
- The learner should be able to suggest management strategies and timing of delivery in patients with this diagnosis.

# Part 1

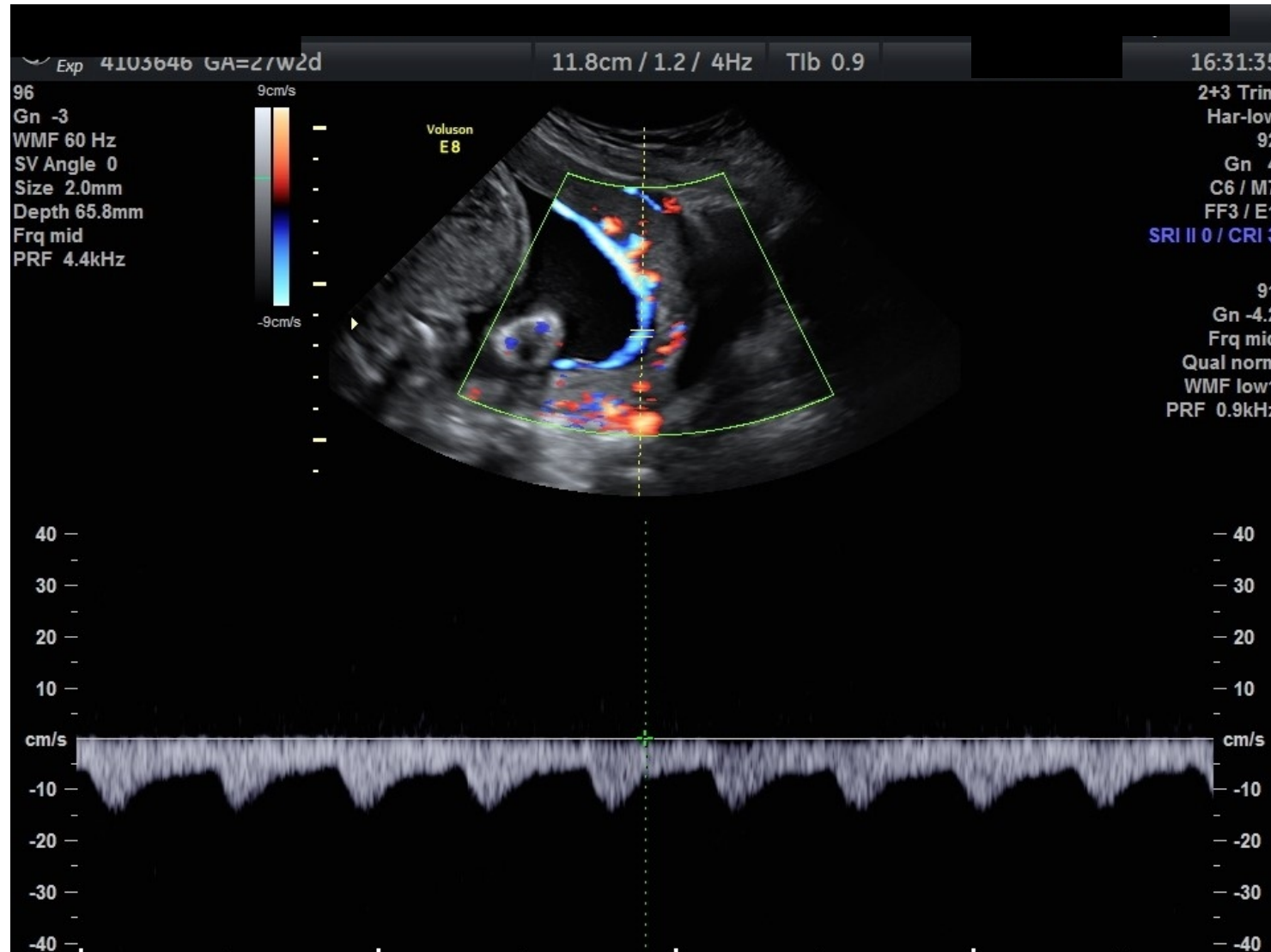


A 40-year-old nulliparous woman whose pregnancy was achieved with the assistance of in-vitro fertilization (IVF) presented to our office for an anatomic survey at 18 weeks' gestation.

She was found to have a marginal fundal cord insertion and complete anterior placenta previa. Color Doppler assessment of the placenta identified a single vessel traversing along the anterior placental bed, and coursing just proximal to the internal cervical OS. Pulse wave Doppler confirmed the vessel to be fetal arterial flow. Subsequent 22, 27, and 31 week ultrasounds continued to show a complete placenta previa with a single fetal vessel coursing from the placental edge inferiorly and over the internal cervical OS. (Images 1 and 2 – begin at next slide)

A final ultrasound at 35 weeks' gestation demonstrated persistence of the findings in Image 2; however, the placental bed that had previously been visualized within the anterior lower uterine segment was no longer present. The anterior fetal vessel, previously embedded in placenta, was now embedded in only bare amnion. (Image 3 – follows the slide for Image 2)

# Images 1 – Mid-sagittal 27 week scan showing fetal vessel with color Doppler flow sitting atop the anterior lower uterine segment placental bed

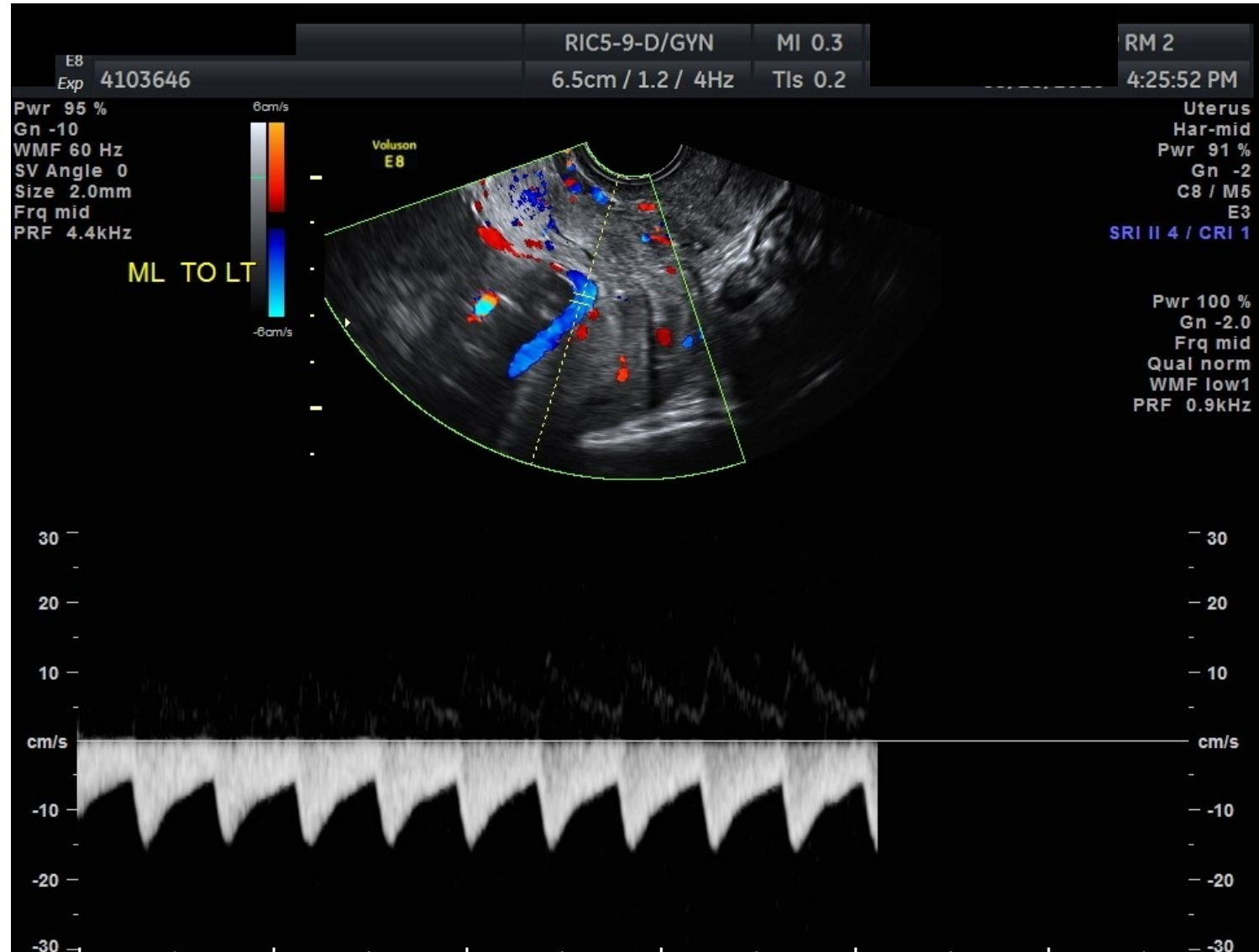


Ultrasound images  
courtesy of:

Alex Fong, M.D.  
Magella Medical  
Group, Long Beach,  
CA. (USA)

[www.mednax.com](http://www.mednax.com)

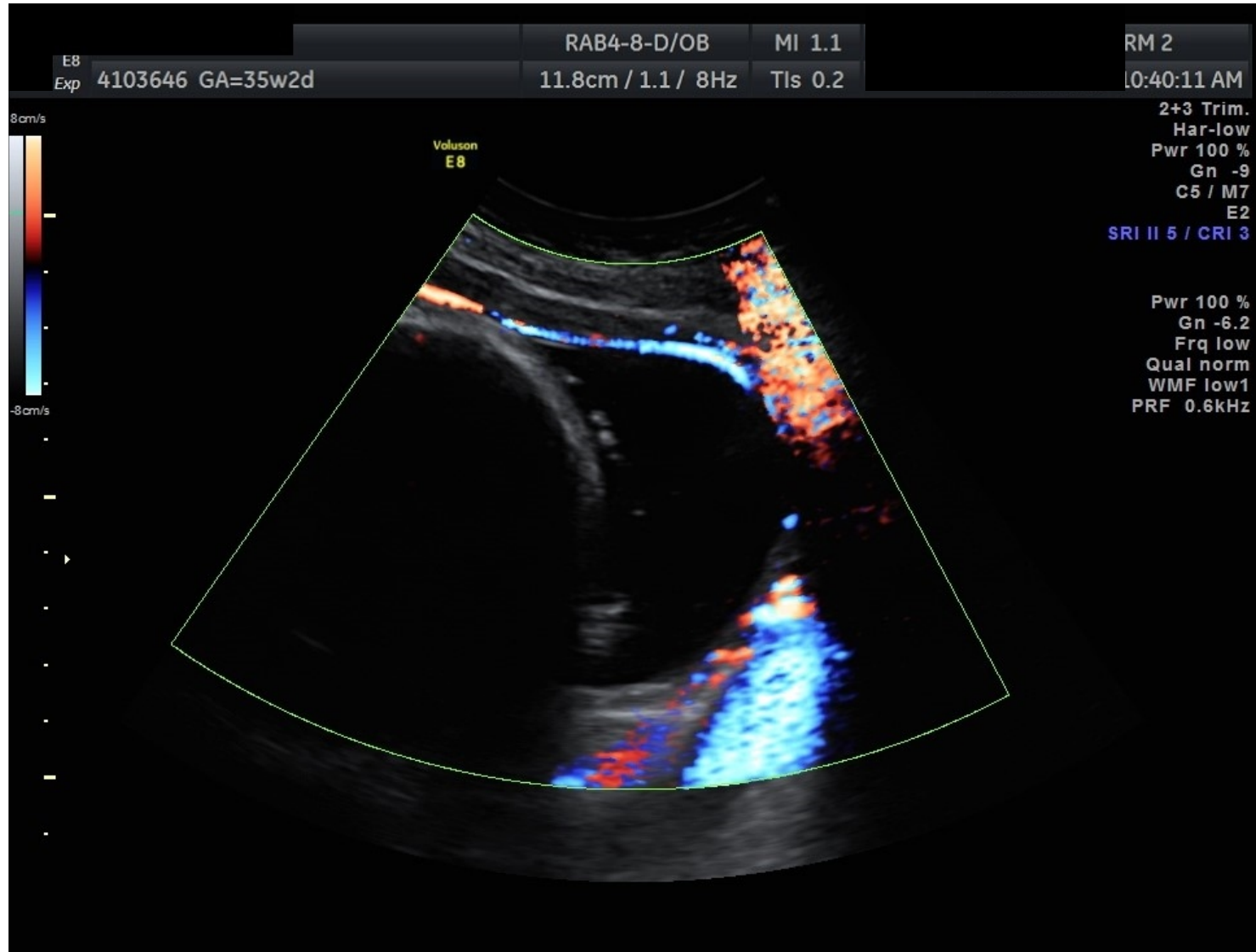
Image 2 – Transvaginal ultrasound demonstrating thinning of placental tissue at level of cervix and fetal vessel wrapping anteriorly to posteriorly



Ultrasound images courtesy of:

Alex Fong, M.D.  
Magella Medical Group, Long Beach, CA. (USA)

Image 3 – Anterior fetal vessel now embedded in bare amnion; previously seen placental tissue no longer present.



Ultrasound images  
courtesy of:

Alex Fong, M.D.  
Magella Medical  
Group, Long Beach,  
CA. (USA)

[www.mednax.com](http://www.mednax.com)

# Take a moment to reflect on the case and images presented.

1. When faced with this case, consider what your next steps might be. What might your diagnosis be?
1. To read about diagnosis/management/review of literature proceed to Part II by clicking on the “View PDF” link for Part II.
1. Following review of Part II, you will have an opportunity to access a list of references.
1. To earn credit, pass the post-test (70% correct) and complete the evaluation.

