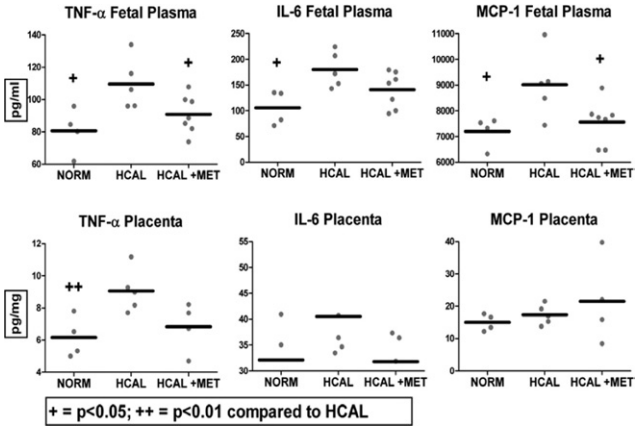
MATERNAL CHARACTERISTICS	DIET		P value
	NORM	HCAL	
Pre-pregnancy wt gain : % (sd)	47 (10.4)	61.2 (15.7)	0.026
Pregnancy wt gain: g/pup (sd)	8.6 (1.2)	8.5 (3.4)	0.7
GD19: HDL: mg/dL (sd)	34.6 (13)	22.5 (11.5)	0.03
GD19: Triglycerides: mg/dL (sd)	379 (152)	597 (208)	0.007
GD19: Chol/HDL: ratio (sd)	2 (0.7)	3.8 (2.1)	0.03
GD19: Plasma leptin : pg/ml (sd)	2017 (2128)	6575 (2495)	0.0190
FETAL OUTCOMES (GD19)			
Avg pup size: g (sd)	1.45 (0.21)	1.37 (0.29)	0.19
Litter size: No. (sd)	12.4 (1.9)	11.6 (2.9)	0.7
Placental wt: g (sd)	0.41 (0.04)	0.35 (0.08)	0.07
Fetal resorption >1: % dams	11	28	0.26



38 Timing of delivery and adverse outcomes in term singleton repeat cesarean deliveries (CD)

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OBJECTIVE: Prior studies have compared the perinatal risks of elective delivery at 37-41 weeks (wk) gestation, but did not evaluate the hazard of delivery versus not delivering at a specific time point. Our objective was to compare the risks of elective repeat CD at each gestational age (GA) starting at 37 wk with the cumulative maternal and neonatal risks of not delivering at that particular GA.

STUDY DESIGN: Repeat CD on singleton gestations were studied prospectively over 4 years at 19 centers, and were classified as elective or indicated, with or without labor. We analyzed their composite maternal (pulmonary edema, cesarean hysterectomy, pelvic abscess, thromboembolism, pneumonia, transfusion, death) and neonatal (respiratory distress, transient tachypnea, necrotizing enterocolitis, sepsis, ventilation, seizure, hypoxic-ischemic encephalopathy, NICU admission, 5 min Apgar ≤3, death) outcomes. To evaluate the hazard, we compared the outcomes after elective repeat CDs without labor at a specific GA with the outcomes for all who were delivered at subsequent GAs. Logistic regression analyses were performed adjusting for race/ethnicity, number of prior CDs, marital status, payor, smoking, medical history, maternal age and BMI.

RESULTS: 23794 repeat CDs were included: 12%, 31%, 41%, 11%, and 5% were at 37, 38, 39, 40, and ≥41 wk, respectively. Repeat CD at later GAs was associated with significantly lower rate of composite neonatal outcome compared with elective CD at 37 or 38 wk. On the other hand, composite neonatal outcome was significantly more frequent in pregnancies continued beyond 39 wk versus elective CD at 39 wk. Maternal outcomes tended to be better with continued pregnancy rather than elective CD at 37 or 38 wk, but the difference was significant only at 37 wk. Maternal outcomes were significantly worse for later delivery compared with elective CD at 39 weeks. These associations remained after controlling for confounders (Table).

CONCLUSION: In women with prior CD, the optimal timing of elective delivery for mother and baby is 39 wk, even after consideration of the risk with continuing pregnancy.

Table: Multivariable analysis adjusted odds ratio and [95% confidence intervals] for continuing pregnancy versus elective repeat CD at the designated week

Week	Composite Neonatal Outcome			Composite Maternal Outcome		
	aOR	95% CI	P-value	aOR	95% CI	P-value
37	0.59	[0.50, 0.69]	<0.0001	0.65	[0.44, 0.98]	0.04
38	0.70	[0.62, 0.78]	<0.0001	1.04	[0.75, 1.45]	0.81
39	1.21	[1.03, 1.42]	0.02	1.84	[1.24, 2.74]	0.003
40	1.77	[1.31, 2.39]	0.0002	1.45	[0.73, 2.90]	0.29
41	1.45	[0.85, 2.48]	0.17	1.53	[0.46, 5.02]	0.49

39 The invasive phenotype of the placenta accrete extravillous trophoblasts (EVTs) is characterized by epithelial-mesenchymal-transition (EMT) and loss of E-cadherin (E-CAD)

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OBJECTIVE: EMT is a process characterized by molecular and phenotypic alterations resulting in increased invasiveness and metastasis of cancer cells. Loss of E-CAD, a transmembrane protein involved in cell-cell adhesion, is a marker of EMT. Proteolysis of E-CAD into C- and N-terminus fragments by ADAM10 and presenilin-1, respectively, generates soluble forms (sE-CAD) which act as transcription factors. Here, we interrogated the expression patterns of E-CAD in the serum and EVTs of women with invasive placentation.

STUDY DESIGN: A cross-sectional study was conducted to determine the serum sE-CAD levels in nonpregnant women (n=15), healthy pregnant women (GA: 27±2 weeks; n=21) and patients with histologically-confirmed invasive placentation (n=21, GA: 29±1 weeks; accreta, n=3; increta, n=13; percreta, n=5), prior to blood transfusion or steroids. Expression level of sE-CAD was assessed by Western blot and ELISA. Myometrial-villous sections of hysterectomy specimens were immunostained for E-CAD (C- and N-terminus domains), cytokeratin-7 (epithelial marker), vimentin (mesenchymal marker), ADAM10 and presenilin-1. Normal placental bed biopsies (n=4) served as control (CRL).

RESULTS: 1) In healthy CRLs, systemic sE-CAD levels were unaffected by pregnancy status or GA (P=.377); 2) Women with advanced trophoblast invasion (increta & percreta) display specific serum immunoreactive bands and lower levels of sE-CAD independent of GA (P=.018); 3) EVTs of accreta but not CRLs immunostained for both cytokeratin and vimentin, consistent with EMT; 4) E-CAD intracellular C-terminus immunoreactivity predominated over that of the extracellular N-terminus, consistent with preferential presenilin-1 processing; 5) Histological scoring showed that EVTs near the myometrial-villous junction had less E-CAD expression compared to EVTs deeper in the myometrium (P=.001).

CONCLUSION: We provide evidence that in placenta accreta EVTs display prototype EMT features. Processing of the C-terminus of E-CAD seems to be an important feature of the molecular mechanisms controlling the invasive phenotype of EVTs.