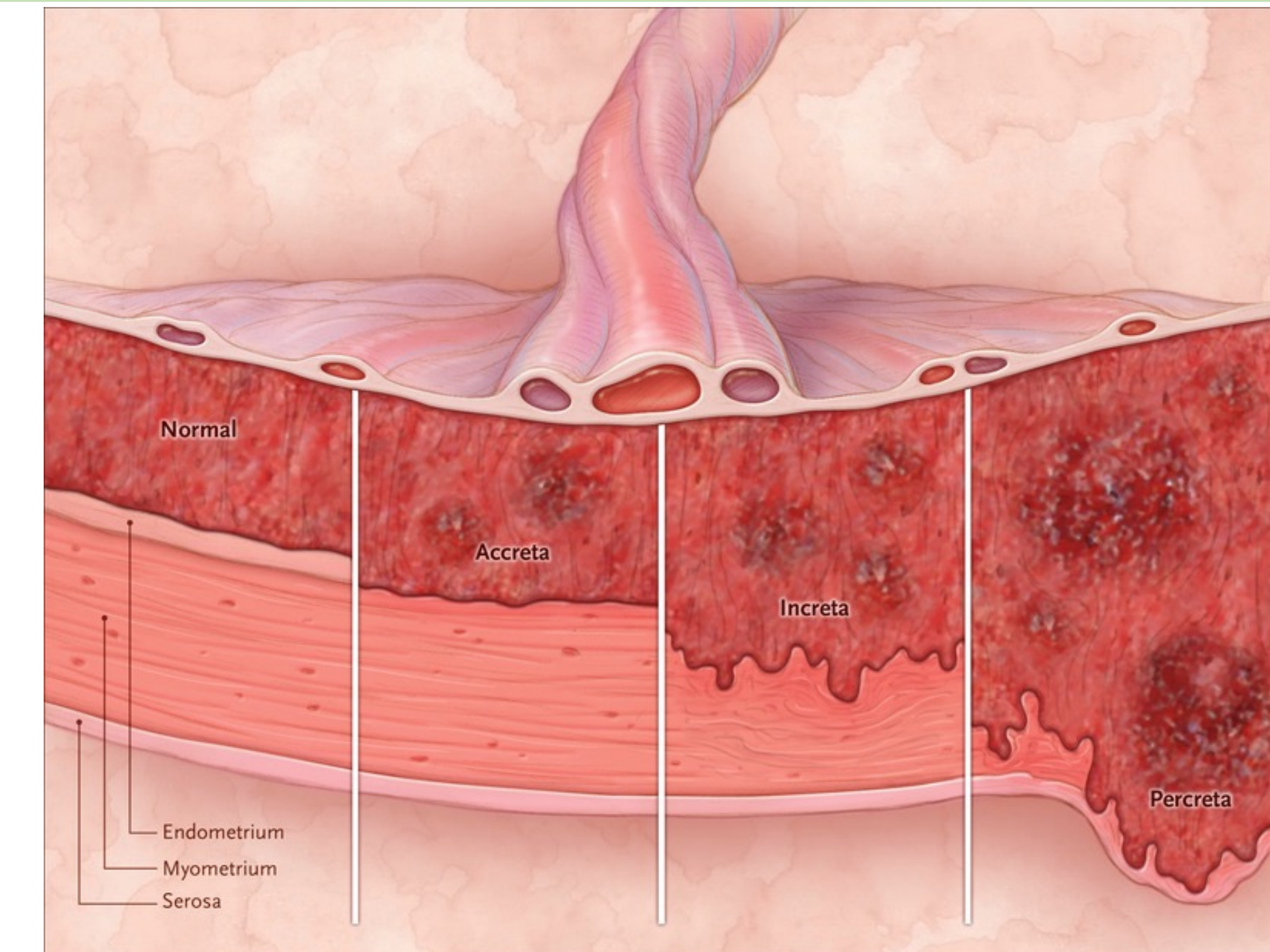
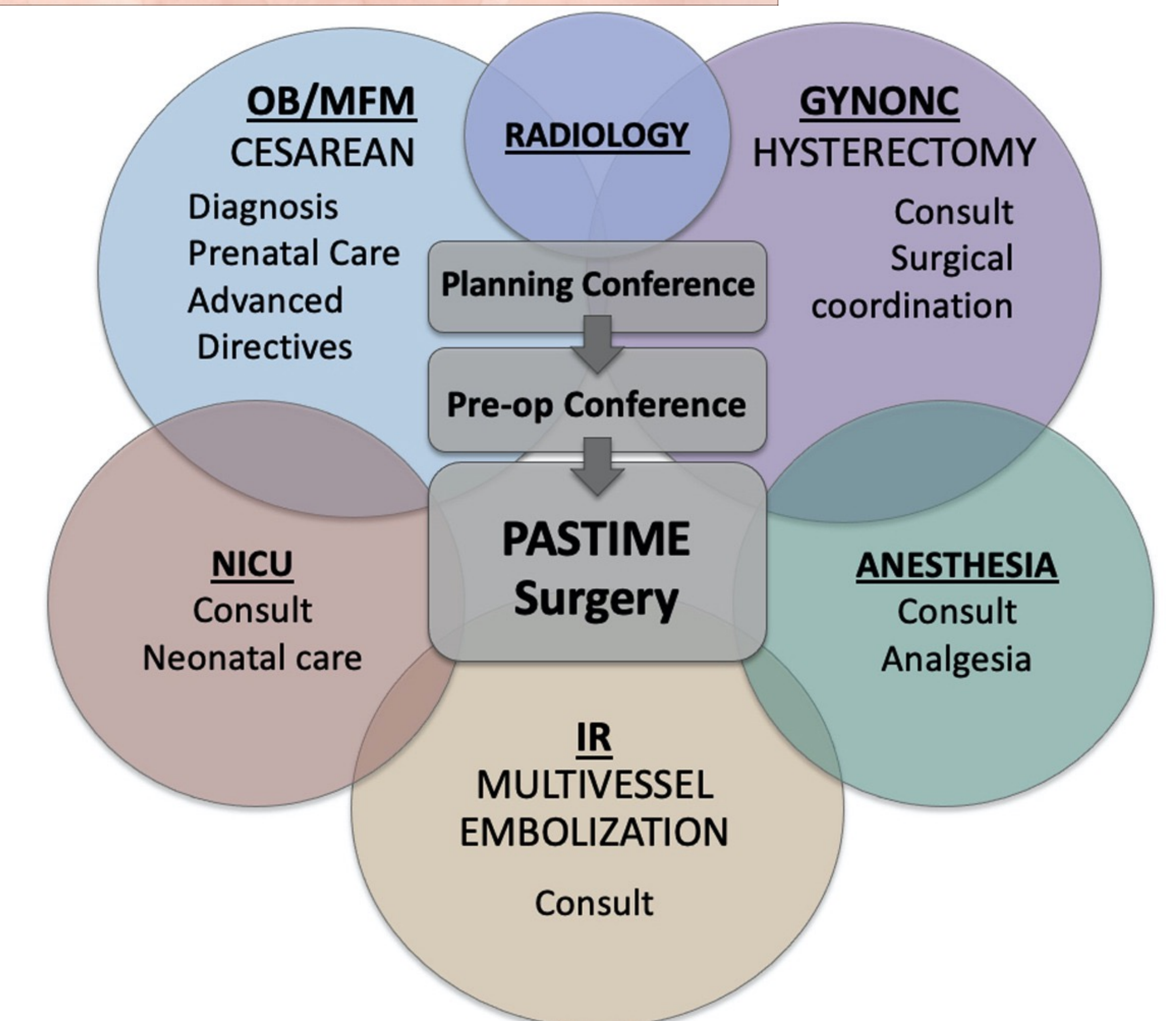


- Placenta accreta spectrum (PAS) disorder refers to the pathologic adherence of the placenta to the uterus.
- PAS often leads to massive hemorrhage, cesarean hysterectomies and maternal morbidity and mortality as the placenta cannot be separated from the uterus.
- PAS disorders are increasing and is estimated to occur in 1 in 272 pregnancies.
- Our center's approach to PAS includes obtaining femoral access, delivery of the neonate followed by multi-vessel embolization and hysterectomy (Placenta Accreta Spectrum Treatment With Intraoperative Multivessel Embolization, PASTIME, protocol).
- As this surgical technique advanced so did the anesthetic approach.
- We describe a shift in anesthetic technique from general anesthesia (GA) to GA with thoracic epidural anesthesia (TEA) for post operative analgesia to single shot spinal with TEA for post operative analgesia.

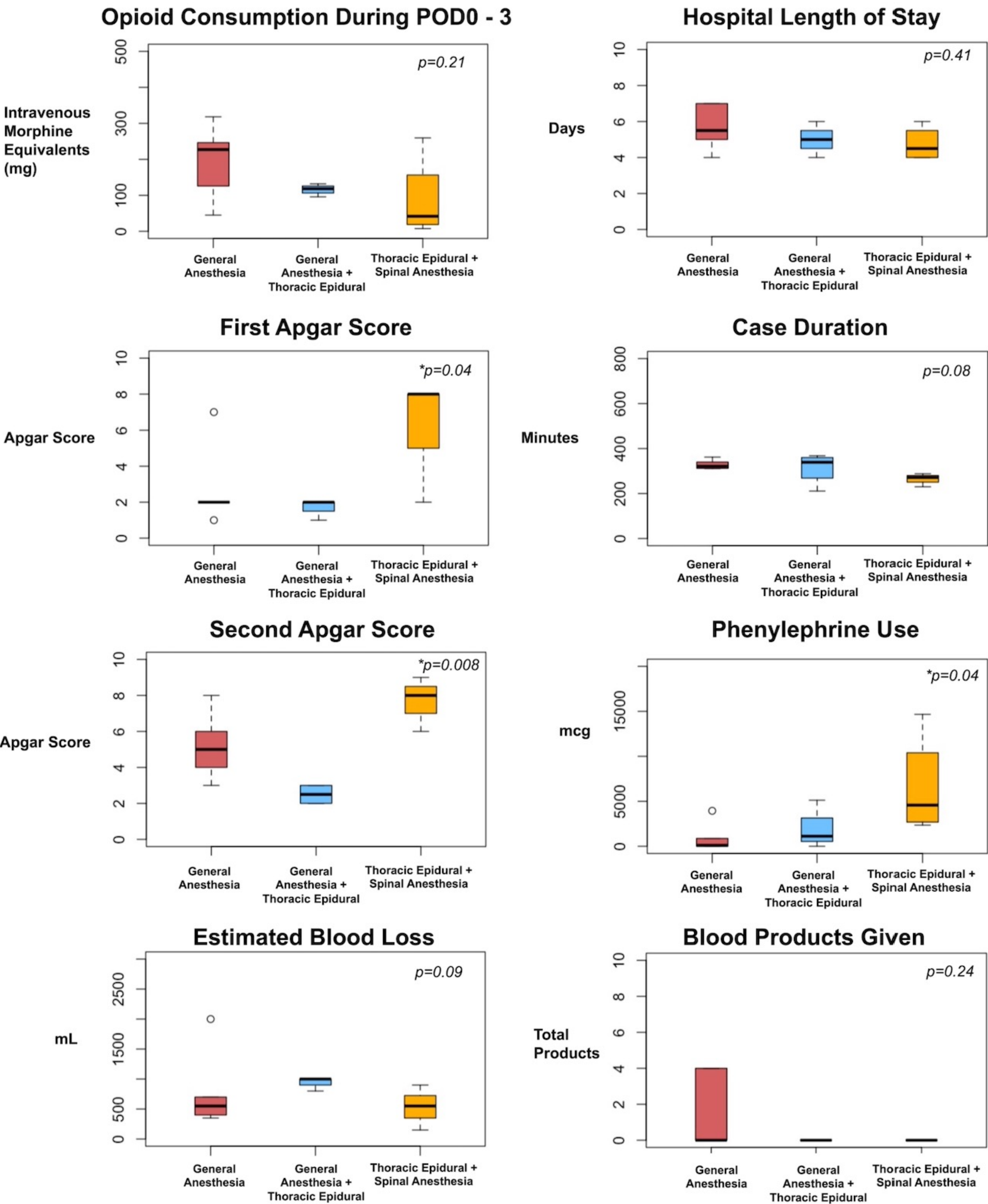


Results

- 14 patients, 6 GA, 4 GA with TEA, and 4 spinal and TEA with conversion to GA after delivery of the fetus.
- There was a statistically significant improvement in APGAR scores between the GA groups and the spinal pre-delivery group.
- There was a statistically significant increase in phenylephrine dosing with the spinal pre delivery group compared with the GA groups.
- There was no difference in total opioid consumption, estimated blood loss, blood products transfused, hospital length of stay, and case duration.
- This case series is limited by small sample size as there is a trend in decreasing opioid consumption, case duration, and hospital length of stay

	General Anesthesia	Thoracic Epidural + General Anesthesia	Thoracic Epidural + spinal	
Total	6	4	4	
Patient Characteristics				
Age (years), median [quartiles]	36.5 [33.8, 38.5]	35.0 [33.0, 35.3]	33.5 [31.5, 35.0]	0.18
Body Mass Index (kg/m2), median [quartiles]	35.0 [34.3, 35.0]	33.0 [31.5, 35.8]	32.0 [30.8, 34.0]	0.52
Gestational Age (days), median [quartiles]	232.5 [226.8, 245.0]	229.5 [224.8, 232.5]	226.0 [219.8, 228.3]	0.38
Outcomes				
Total Opioid Consumption (mg), median [quartiles]	227.1 [146.4, 246.4]	118.4 [111.7, 122.8]	41.8 [24.4, 105.0]	0.21
Apgar Score 1	2 [2, 2]	2 [1, 2]	8 [6.5, 8]	0.04
Apgar Score 2	5 [4, 6]	2.5 [2, 3]	8 [7.5, 8.5]	0.008
Estimated Blood Loss	550 [425, 675]	1000 [950, 1000]	550 [450, 637.5]	0.09
Hospital Length of Stay	5.5 [5, 6.75]	5.0 [4.75, 5.25]	4.5 [4, 5.25]	0.41
Case Duration (minutes)	321 [314, 335]	339 [297, 356]	271 [260, 276]	0.08
Phenylephrine Dosing (mcg)	100 [0, 706]	1115 [795, 2157]	2575 [2860, 8256]	0.04
Blood Products Transfused	0 [0, 3]	0 [0, 0]	0 [0, 0]	0.24

Table 1. Patient characteristics and outcomes in the three cohorts
p-value calculated by Kruskal-Wallis test



Discussion

- With decreasing surgical times, ideally cases would be done under single shot spinal anesthesia with thoracic epidural to extend surgical anesthesia and provide postoperative analgesia without the need to convert to GA.
- Although it requires a second procedure, as compared to a lumbar combined spinal-epidural, thoracic epidural is thought to provide superior postoperative analgesia for the benefits of early ambulation and foley catheter removal.
- This case series is limited by the small sample size. With increased numbers, potential outcome benefits such as decreased opioid consumption, return of bowel function, incidence of postoperative ileus, incidence in the development of chronic pain may be further elucidated.

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3. Melber DJ, Berman ZT, Jacobs MB, Picel AC, Conturie CL, Zhang-Rutledge K, Binder PS, Eskander RN, Roberts AC, McHale MT, Ramos GA, Ballas J, Kelly TF. Placenta Accreta Spectrum Treatment With Intraoperative Multivessel Embolization: the PASTIME protocol. Am J Obstet Gynecol. 2021 Jul 7:S0002-9378(21)00786-9