Global Placenta Accreta Spectrum Survey

For the purposes of this study the term placenta accreta spectrum (PAS) is defined as FIGO Grade 1, 2, or 3*:

Grade 1: abnormally adherent placenta (placenta adherent or creta) - attached directly to the surface of the middle layer of the uterine wall (myometrium) without invading it

Grade 2: abnormally invasive placenta (increta) - invasion into the myometrium

Grade 3: abnormally invasive placenta (percreta) invasion may reach surrounding pelvic tissues, vessels and organs

***Jauniaux, E., Ayres-de-Campos, D., Langhoff-Roos, J., Fox, K.A., Collins, S. FIGO classification for the clinical diagnosis of placenta accreta spectrum disorders. Int J Gynecol Obstet. 2019. 146: 20-24. https://doi.org/10.1002/ijgo.12761**

General Information

Do you consider your institution/hospital a regional referral center for the diagnosis and/or management of placenta accreta spectrum?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

In which country is your center located?

- ◯ Argentina
- ◯ Australia
- ◯ Austria
- ◯ Belgium
- ◯ Bolivia
- ◯ Brazil
- ◯ Canada
- ◯ Chile
- ◯ China
- ◯ Colombia
- ◯ Czech Republic
- ◯ Denmark
- ◯ Ecuador
- ◯ Egypt
- ◯ El Salvador
- ◯ England
- ◯ Ethiopia
- ◯ Finland
- ◯ France
- ◯ Germany
- ◯ Guatemala
- ◯ Honduras
- ◯ Hong Kong
- ◯ Iceland
- ◯ India
- ◯ Indonesia
- ◯ Iran
- ◯ Iraq
- ◯ Ireland
- ◯ Israel
- ◯ Italy
- ◯ Japan
- ◯ Lebanon
- ◯ Lithuania
- ◯ Malaysia
- ◯ Mexico
- ◯ Netherlands
- ◯ New Zealand
- ◯ Nigeria
- ◯ Norway
- ◯ Pakistan
- ◯ Panama
- ◯ Paraguay
- ◯ Peru
- ◯ Poland
- ◯ Portugal
- ◯ Qatar
- ◯ Russia
- ◯ Saudi Arabia
- ◯ Singapore
- ◯ Slovenia
- ◯ South Africa
- ◯ South Korea
- ◯ Sri Lanka
- ◯ Sweden
- ◯ Switzerland
- ◯ Taiwan
- ◯ Thailand
- ◯ Tunisia
- ◯ Turkey
- ◯ United Arab Emirates
- ◯ United States of America
- ◯ Uruguay
- ◯ Venezuela
- ◯ Vietnam

Please identify how you view your center in terms of volume of PAS patients.

- ◯ Low
- ◯ Medium
- ◯ High

What is the approximate number of PAS cases your center manages each year?

- ◯ We do not routinely care for PAS patients.
- ◯ 1-5
- ◯ 5-9
- ◯ 10-19
- ◯ 20-29
- ◯ 30-39
- ◯ 40-49
- ◯ 50+

The following questions are related to prenatal diagnosis of PAS:

Which approach does your center use as the predominant modality in making the prenatal diagnosis of PAS?

- ◯ Ultrasound
- ◯ MRI
- ◯ Both Ultrasound and MRI
- ◯ PAS is not routinely diagnosed prenatally
- ◯ Other

Other: _____

In which trimester do you routinely start assessing for PAS?

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ Other

Other: _____

If a placenta previa is present without any history of uterine surgery, do you routinely use transvaginal ultrasound in assessing the placenta for PAS?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

If a placenta previa is present with any history of uterine surgery, do you routinely use transvaginal ultrasound in assessing the placenta for PAS?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

Does your center routinely participate in the diagnosis and/or management of cesarean scar pregnancies?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

In the setting of a cesarean scar pregnancy, your center endorses the following statement:	◯ Continuation of pregnancy does not incur risks similar to PAS and expectant management is recommended. ◯ Continuation of pregnancy does incur risks similar to PAS and expectant management is not recommended ◯ Continuation of pregnancy does incur risks similar to PAS and expectant management is recommended. ◯ Our counseling is dependent upon the severity of the imaging findings. ◯ We do not manage or counsel patients with a cesarean scar pregnancy.
Does your center routinely use maternal serum/plasma laboratory tests to assist in making the prenatal diagnosis of PAS?	◯ Yes ◯ No
If yes, select all that apply:	☐ AFP ☐ PAPP-A ☐ HCG ☐ NIPT Fetal Fraction ☐ Other
Other:	_____

The following questions are related to antenatal management of PAS:

Do you utilize a multidisciplinary PAS care team at your center?	◯ Yes ◯ No
Are all prenatally-diagnosed PAS patients referred/transferred to the PAS team during the pregnancy?	◯ Yes ◯ No
Which of the following specialties do you utilize for each PAS case? (select all that apply)	☐ Prenatal Imaging/Radiology ☐ Maternal-Fetal Medicine/Perinatologist [High Risk Obstetrics] ☐ Obstetrics ☐ Obstetric Anesthesiology ☐ Anesthesiology ☐ Gynecology Oncology ☐ General Surgery ☐ Interventional Radiology ☐ Urology ☐ Vascular Surgery/Trauma Surgery ☐ Critical Care Medicine ☐ Transfusion Medicine ☐ Mental Health/Social Work ☐ Other
Other:	_____

Which of the following specialties do you utilize on a case-by-case basis for PAS cases? (select all that were not selected above)	☐ Prenatal Imaging/Radiology ☐ Maternal-Fetal Medicine/Perinatologist [High Risk Obstetrics] ☐ Obstetrics ☐ Obstetric Anesthesiology ☐ Anesthesiology ☐ Gynecology Oncology ☐ General Surgery ☐ Interventional Radiology ☐ Urology ☐ Vascular Surgery/Trauma Surgery ☐ Critical Care Medicine ☐ Transfusion Medicine ☐ Mental Health/Social Work ☐ Other
Other:	_____
Do you perform a fetal lung maturity test to guide delivery timing?	◯ Yes ◯ No ◯ Other
Other:	_____
If yes, at what gestational age (in weeks) would you stop performing this test in the setting of a scheduled delivery?	◯ 24 ◯ 25 ◯ 26 ◯ 27 ◯ 28 ◯ 29 ◯ 30 ◯ 31 ◯ 32 ◯ 33 ◯ 34 ◯ 35 ◯ 36 ◯ 37 ◯ 38 ◯ 39 ◯ 40
If a PAS case is scheduled to be delivered < 34 weeks, do you routinely recommend antenatal corticosteroids for fetal lung maturity?	◯ Yes ◯ No ◯ Other
Other:	_____
If a PAS case is scheduled to be delivered between 34w1d and 36w6d, do you routinely recommend antenatal corticosteroids for fetal lung maturity?	◯ Yes ◯ No ◯ Other
Other:	_____

If a PAS case is scheduled to be delivered > 37 weeks, do you routinely recommend antenatal corticosteroids for fetal lung maturity?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

Do you attempt to optimize pre-delivery blood count (hematocrit and/or hemoglobin)?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

If yes, which of the following do you routinely utilize? (select all that apply)

- ☐ Oral iron
- ☐ IV iron
- ☐ Erythropoietin
- ☐ Blood transfusion
- ☐ Other

Other: _____

In cases of PAS that are not diagnosed prenatally, at time of surgical diagnosis, what routinely occurs at your hospital for a stable, non-hemorrhaging patient?

- ◯ Immediate management of PAS by the surgical team present at delivery/time of diagnosis
- ◯ Intraoperative consultation from the PAS specialist is requested
- ◯ Intraoperative consultation from a specialist outside of the PAS team is requested
- ◯ Immediate management of PAS is deferred. Postoperative consultation from the PAS specialist is requested.
- ◯ Other

Other: _____

The following questions are related to PAS patients with a placenta previa:

Do you routinely recommend pelvic rest (nothing in the vagina) throughout the course of pregnancy?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

Do you routinely recommend hospitalization prior to delivery?

- ◯ Yes
- ◯ No
- ◯ Other

Other: _____

If yes, at what gestational age (in weeks)?

◯ 24
◯ 25
◯ 26
◯ 27
◯ 28
◯ 29
◯ 30
◯ 31
◯ 32
◯ 33
◯ 34
◯ 35
◯ 36
◯ 37
◯ 38
◯ 39
◯ 40

At what gestational age (in weeks) do you routinely recommend delivery?

◯ 24
◯ 25
◯ 26
◯ 27
◯ 28
◯ 29
◯ 30
◯ 31
◯ 32
◯ 33
◯ 34
◯ 35
◯ 36
◯ 37
◯ 38
◯ 39
◯ 40

The following questions are related to PAS patients without a placenta previa:

Do you routinely recommend pelvic rest (nothing in the vagina) throughout the course of pregnancy?

◯ Yes
◯ No
◯ Other

Other:

_____

Do you routinely recommend hospitalization prior to delivery?

◯ Yes
◯ No
◯ Other

Other:

_____

If yes, at what gestational age (in weeks)?

- ◯ 24
- ◯ 25
- ◯ 26
- ◯ 27
- ◯ 28
- ◯ 29
- ◯ 30
- ◯ 31
- ◯ 32
- ◯ 33
- ◯ 34
- ◯ 35
- ◯ 36
- ◯ 37
- ◯ 38
- ◯ 39
- ◯ 40

At what gestational age (in weeks) do you routinely recommend delivery?

- ◯ 24
- ◯ 25
- ◯ 26
- ◯ 27
- ◯ 28
- ◯ 29
- ◯ 30
- ◯ 31
- ◯ 32
- ◯ 33
- ◯ 34
- ◯ 35
- ◯ 36
- ◯ 37
- ◯ 38
- ◯ 39
- ◯ 40

Which of the following modes of delivery do you routinely recommend without any other obstetric indication for cesarean delivery?

- ◯ Cesarean delivery
- ◯ Vaginal delivery
- ◯ Other

Other:

_____

The following questions are related to delivery management of PAS patients with a placenta previa via cesarean delivery:

Which of the following anesthesia do you routinely administer?

- ◯ Regional anesthesia [epidural/spinal] with conversion to general anesthesia if clinically indicated
- ◯ Regional anesthesia [epidural/spinal] with planned conversion to general anesthesia after delivery
- ◯ General anesthesia from the start of the case
- ◯ Other

Other:

_____

If PAS is confirmed intraoperatively, do you routinely attempt to remove the placenta?

- ◯ Yes
- ◯ No
- ◯ Other

Other:

_____

If PAS is confirmed intraoperatively, do you routinely perform intraoperative grading (i.e. FIGO Grade 1, 2, 3a, 3b, 3c)?

◯ Yes
◯ No
◯ Other

Other:

_____

Do you routinely place vascular occlusion devices (vascular balloons) prior to delivery?

◯ Yes
◯ No
◯ Other

Other:

_____

If yes, specify the location of the preoperative vascular balloons: (select all that apply)

☐ Aorta
☐ Common iliac arteries
☐ Internal iliac arteries
☐ Uterine arteries
☐ Other

Other:

_____

Do you routinely place ureteral stents/catheters prior to delivery?

◯ Yes
◯ No
◯ Other

Other:

_____

What surgical skin incision do you routinely utilize?

◯ Vertical midline
◯ Pfannenstiel
◯ Maylard
◯ Cherney
◯ Other

Other:

_____

What uterine incision do you routinely utilize?

◯ Low transverse
◯ High transverse
◯ Classical
◯ Fundal
◯ Other

Other:

_____

Identify the PAS management strategy routinely used at your center.

◯ Cesarean hysterectomy
◯ Leave placenta in-situ (expectant management)
◯ En-bloc resection
◯ Delayed hysterectomy
◯ Other

Other:

_____

Do you routinely use vascular occlusion devices (vascular balloons/vascular clamps) intraoperatively?

◯ Yes
◯ No
◯ Other

Other:

_____

If yes, specify the location of the intraoperative vascular devices: (select all that apply)

☐ Aorta
☐ Common iliac arteries
☐ Internal iliac arteries
☐ Uterine arteries
☐ Aortic clamp/vascular clamp
☐ Other

Other:

_____

The following questions are related to delivery management of PAS patients without a placenta previa via cesarean delivery:

Which of the following anesthesia do you routinely administer?

◯ Regional anesthesia [epidural/spinal] with conversion to general anesthesia if clinically indicated
◯ Regional anesthesia [epidural/spinal] with planned conversion to general anesthesia after delivery
◯ General anesthesia from the start of the case
◯ Other

Other:

_____

If PAS is confirmed intraoperatively, do you routinely attempt to remove the placenta?

◯ Yes
◯ No
◯ Other

Other:

_____

If PAS is confirmed intraoperatively, do you routinely perform intraoperative grading (i.e. FIGO Grade 1, 2, 3a, 3b, 3c)?

◯ Yes
◯ No
◯ Other

Other:

_____

Do you routinely place vascular occlusion devices (vascular balloons) prior to delivery?

◯ Yes
◯ No
◯ Other

Other:

_____

If yes, specify the location of the preoperative vascular balloons: (select all that apply)	☐ Aorta ☐ Common iliac arteries ☐ Internal iliac arteries ☐ Uterine arteries ☐ Other
Other:	_____
Do you routinely place ureteral stents/catheters prior to delivery?	◯ Yes ◯ No ◯ Other
Other:	_____
What surgical skin incision do you routinely utilize?	◯ Vertical midline ◯ Pfannenstiel ◯ Maylard ◯ Cherney ◯ Other
Other:	_____
What uterine incision do you routinely utilize?	◯ Low transverse ◯ High transverse ◯ Classical ◯ Fundal ◯ Other
Other:	_____
Identify the PAS management strategy routinely used at your center.	◯ Cesarean hysterectomy ◯ Leave placenta in-situ (expectant management) ◯ En-bloc resection ◯ Delayed hysterectomy ◯ Other
Other:	_____
Do you routinely use vascular occlusion devices (vascular balloons/vascular clamps) intraoperatively?	◯ Yes ◯ No ◯ Other
Other:	_____
If yes, specify the location of the intraoperative vascular devices: (select all that apply)	☐ Aorta ☐ Common iliac arteries ☐ Internal iliac arteries ☐ Uterine arteries ☐ Aortic clamp/vascular clamp ☐ Other

Other:

_____

The following questions are related to delivery management of PAS patients without a placenta previa via vaginal birth:

If the patient is requesting uterine preservation, they are not bleeding and remain stable, and the entire placenta does not deliver with routine traction, manual removal, or curettage, which of the following do you routinely recommend?

- ◯ Expectant management
- ◯ Methotrexate
- ◯ Uterine embolization
- ◯ Immediate hysterectomy
- ◯ Immediate hysterotomy with resection
- ◯ Delayed hysterectomy
- ◯ Immediate hysteroscopic resection
- ◯ Delayed hysteroscopic resection
- ◯ Other

Other:

_____

If the patient is not requesting uterine preservation, they are not bleeding and remain stable, and the entire placenta does not deliver with routine traction, manual removal, or curettage, which of the following do you routinely recommend?

- ◯ Expectant management
- ◯ Methotrexate
- ◯ Uterine embolization
- ◯ Immediate hysterectomy
- ◯ Immediate hysterotomy with resection
- ◯ Delayed hysterectomy
- ◯ Immediate hysteroscopic resection
- ◯ Delayed hysteroscopic resection
- ◯ Other

Other:

_____

The following questions are related to postpartum management of PAS patients who underwent hysterectomy:

Where do these patients routinely recover?

- ◯ Labor & Delivery recovery unit
- ◯ Intensive Care Unit [regardless of intubation status]
- ◯ Main operating room recovery unit
- ◯ Other

Other:

_____

Are these patients routinely offered mental health support/social work during the postpartum period?

- ◯ Yes
- ◯ No
- ◯ Other

Other:

_____

What is the typical length of postpartum stay for these patients (in days)?

- ◯ 2-3
- ◯ 4-5
- ◯ 6-7
- ◯ 8+

The following questions are related to future studies on PAS:

We are interested in addressing knowledge gaps in PAS outside of obstetric management. If possible, could you please provide the names and contact information for the appropriate expert at your institution in the following departments?

Anesthesiology Contact Name: _____

Anesthesiology Email Address: _____

Pathology Contact Name: _____

Pathology Email Address: _____

Blood Bank Contact Name: _____

Blood Bank Email Address: _____