

1 **Placenta accreta spectrum disorder: A new standardized terminology is essential to**
2 **better define this condition**

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16 **Short running head:** Placenta accreta spectrum

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21 **Key words:** abnormally invasive placenta; placenta accreta; placenta accreta spectrum;
22 placenta increta; placenta percreta

23 Word count: 397 (limit 400 with 4 ref)

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25 **Abbreviations:** AIP: abnormally invasive placenta, FIGO: the International Federation
26 of Gynecology and Obstetrics, INOSS: The International Network of Obstetric
27 Surveillance Systems, MAP: morbidly adherent placenta, PAS: placenta accreta spectrum

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29 **Dear Editor,**

30 New strategies for the diagnostic and management for the increasing number of women
31 presenting with “placenta accreta” are urgently needed worldwide. However, the lack of
32 a uniform terminology for this condition, has made the use of published data difficult, in
33 particular regarding the major differences in outcome between adherent accreta and
34 invasive (increta and percreta) accreta. If not clearly defined the word “accreta” can have
35 a “double” meaning with “accreta” used in a wider sense to include placental retention
36 but also in a narrower sense, to include both adherent and invasive accreta.

37 The recent use of term “morbidly adherent placenta (MAP)” has added to the
38 confusion. Morbidly adherent was originally used in the 19th century to describe placental
39 retention but it has been increasingly use in particular in cohort series on prenatal imaging
40 to include both adherent and invasive accreta. MAP is not only inaccurate but
41 contradictory when the authors include both “adherent” cases and increta/percreta i.e.
42 “invasive” cases in their series, and, thus, the term “morbidly” “adherent” should be
43 abandoned or avoided. The same argument may hold for the use of the term “abnormally
44 invasive placenta (AIP)” as it excludes adherent accreta.

45 The Japanese Society of Obstetrics and Gynecology originally decided to use
46 “placenta accreta, increta, percreta” to describe this condition, which may prevent this
47 “double” meaning of accreta. The International Network of Obstetric Surveillance
48 Systems (INOSS) has recently defined the conditions of abnormally invasive
49 placenta/placentation as “various degree of invasive growth of the placenta in the uterine
50 wall, with an abnormally difficult or incomplete removal (including leaving the placenta
51 in situ)”.¹

52 We think that using placenta accreta spectrum disorders (PAS) i.e. creta, increta,
53 percreta) may better define the condition.^{2,4} The term “Creta” or adherent accreta has been
54 use by pathologists to the describe abnormal adhesion of villous tissue directly to the
55 myometrium without interposing decidua, whereas increta/percreta defines placental
56 invasion of the myometrium beyond the junction zone between the decidua and the
57 myometrium. In the absence histological confirmation of an ultrasound or clinical
58 diagnosis, it is not always possible to differentiate between the different degree of accreta
59 placentation. Within this context, the use of “placenta accreta spectrum (PAS) disorders”.

60 is inclusive and preferable to use. In addition authors should be encourage to separate
61 adherent from invasive cases in their report and when possible support their findings with
62 detailed histopathological data.

63 In March 2018, the International Journal of Gynecology and Obstetrics (Official
64 Journal of the International Federation of Gynecology and Obstetrics (FIGO)) published
65 a “themed issue” including the “FIGO consensus guidelines on placenta accreta spectrum
66 disorders”. For the above reasons, the term “placenta accreta spectrum” was used to
67 standardize the terminology and promotes its use in future publications.^{3,4} The Japanese
68 society will therefore support the use of “PAS disorders”. This 1:1 correspondence may
69 also be welcomed.

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73 **References**

- 74 1. Schaap T, Bloemenkamp K, Deneux-Tharoux C, et al. Defining definitions:
75 a Delphi study to develop a core outcome set for conditions of severe maternal
76 morbidity. BJOG. 2017 Jul 29. doi: 10.1111/1471-0528.14833. [Epub ahead of
77 print]
- 78 2. Jauniaux E, Collins S, Burton GJ. Placenta accreta spectrum: pathophysiology
79 and evidence-based anatomy for prenatal ultrasound imaging. Am J Obstet Gynecol.
80 2018;218:75-87.
- 81
- 82 3. Jauniaux E, Ayres-de-Campos D; FIGO Placenta Accreta Diagnosis and
83 Management Expert Consensus Panel. FIGO consensus guidelines on placenta
84 accreta spectrum disorders: Introduction. Int J Gynaecol Obstet. 2018;140:261-264.
85
- 86 4. Jauniaux E, Silver RM, Matsubara S. The new world of placenta accreta spectrum
87 disorders. Int J Gynaecol Obstet. 2018;140:259-260.

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89 **Figure 1** Schema showing placenta creta, increta and percreta. The term 'placenta accreta spectrum (PAS)
90 disorders' covers placenta creta, increta and percreta. Creta is 'adherent abnormality' whereas increta/percreta
91 is 'invasive abnormality'.
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