

Thrombocytopenia in Pregnancy and Neuraxial Anesthesia: Delphi Survey Participants

*indicates taskforce members

Committee Co-chairs: Lisa Leffert and Melissa Bauer

American College of Obstetricians and Gynecologists (ACOG)

*Mark Turrentine, MD, Baylor College of Medicine

American Society of Hematology (ASH)

*Theresa Gernsheimer, MD, University of Washington School of Medicine

*Anita Rajasekhar, MD MS, University of Florida

*Juliana Perez Botero, MD, Medical College of Wisconsin

American Society of Regional Anesthesia and Pain Medicine (ASRA)

*Christopher Wu, MD, Hospital for Special Surgery, Weill Cornell Medicine

Society of Maternal Fetal Medicine (SMFM)

*Andra James, MD, Duke University

Society for Obstetric Anesthesia and Perinatology (SOAP)

***Lisa Leffert, MD**, Massachusetts General Hospital

***Melissa Bauer, DO**, University of Michigan (current: Duke University)

*Katherine Arendt, MD, Mayo Clinic

Brian Bateman, MD MSc, Brigham and Women's Hospital

*Yaakov Beilin, MD, Icahn School of Medicine at Mount Sinai

Brendan Carvalho, MD, Stanford University

Michaela Farber, MD MPH, Brigham and Women's Hospital

Jennifer Gage, MD, University of Vermont

Robert Gaiser, MD, University of Kentucky

Ashraf Habib, MD, Duke University

Rachel Kacmar, MD, University of Colorado

Klaus Kjaer, MD, Weill Cornell Medicine

*Ruth Landau, MD, Columbia University College of Physicians and Surgeons

Grace Lim, MD, University of Pittsburgh/Magee Women's

Grant Lynde, MD, Emory University

Heather Nixon, MD, University of Illinois-Chicago

Greg Palleschi, MD, North Shore University Hospital/Northwell Health

*B. Scott Segal, MD, Wake Forest University School of Medicine

Michelle Simon, MD, University of Texas Medical Branch

Eric Sloan, MD, Medical College of Wisconsin

*R. d'Arby Toledano, MD PhD, NYU Langone Health

Paloma Toledo, MD, Northwestern University

Manuel Vallejo, MD, West Virginia University School of Medicine

Edward Yagmour, MD, Vanderbilt University

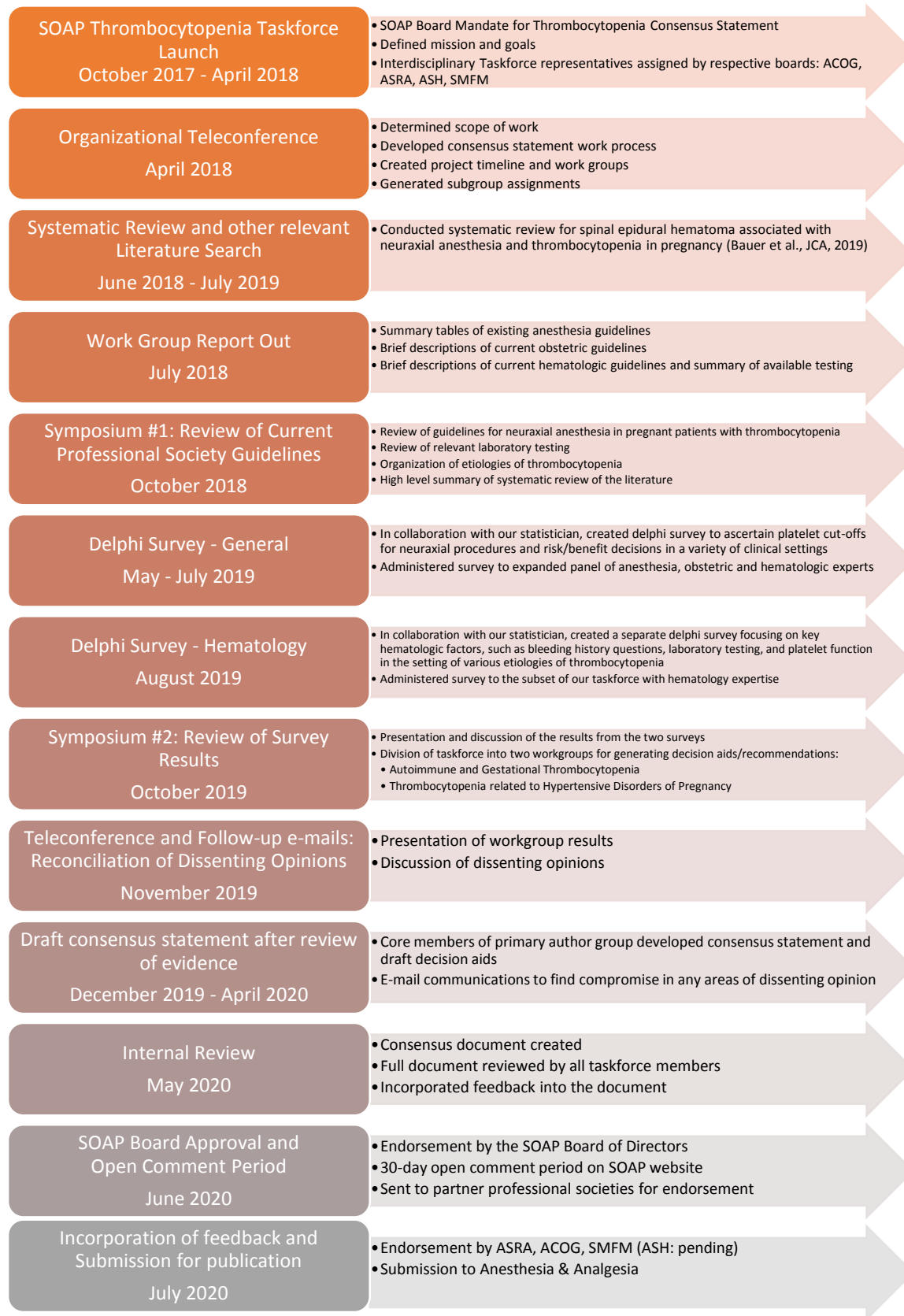
Others:

*Timothy Houle, PhD, Massachusetts General Hospital (Biostatistician)

*Mark MacEachern, MLIS, University of Michigan (Library Scientist)

*Jason Cooper, MD PhD, University of Washington School of Medicine (Hematology)

SOAP Thrombocytopenia in Pregnancy and Neuraxial Anesthesia - Modified Delphi Process



Thrombocytopenia Delphi - Round 1

Thank you for participating in this survey assessing your management of obstetric patients with thrombocytopenia.

We greatly appreciate your participation and input. We ask that you answer every question to the best of your ability with the information provided knowing there may be important details lacking (note: for those of you who are not anesthesiologists, we ask that you respond based on the actions you would recommend).

Demographic Information

- Anesthesiologist
- Physician (not Anesthesiologist)

Question 1

What is your platelet count cutoff for placing a labor epidural in a parturient with a BMI = 30 kg/m², no history or physical signs of bleeding (thrombocytopenia type not specified)?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if the patient is at high risk for cesarean delivery?

- Yes No

(e.g., a patient with a category II tracing, IUGR, or unstable fetal lie)

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a spinal anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a combined spinal-epidural anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would any of your answers change if the patient had an unfavorable airway?
If yes, please answer only the following questions where an unfavorable airway would lead you to choose a different platelet count.

- Yes No

If an unfavorable airway causes your platelet cutoff to change from above for placing a labor epidural in a parturient with a BMI = 30 kg/m², no history or physical signs of bleeding (thrombocytopenia type not specified), what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If a bad airway causes your platelet cutoff to change from above when the patient is at high risk for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

(e.g., a patient with a category II tracing, IUGR, or unstable fetal lie)

If other, please indicate platelet cutoff

If a bad airway causes your platelet cutoff to change from above when you are planning a spinal anesthetic for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If a bad airway causes your platelet cutoff to change from above when if you are planning a combined spinal-epidural anesthetic for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Question 2 - Immune Thrombocytopenic Purpura (ITP)

What would your platelet cutoff be for placing a labor epidural if the diagnosis was Immune Thrombocytopenic Purpura (ITP)?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if this patient is at high risk for cesarean delivery? (e.g., a patient with a category II tracing, IUGR, or unstable fetal lie)

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a spinal anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a combined spinal-epidural anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would any of your answers change if the patient had an unfavorable airway? If yes, please answer only the following questions where an unfavorable airway would lead you to choose a different platelet count.

- Yes No

If your platelet cutoff changes for placing a labor epidural when the diagnosis was Immune Thrombocytopenic Purpura (ITP), what would be your platelet cutoff?

$\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when this patient is at high risk for cesarean delivery, what would be your platelet cutoff?

$\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when you are planning a spinal anesthetic for cesarean delivery, what would be your platelet cutoff?

$\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when you are planning a combined spinal-epidural anesthetic for cesarean delivery, what would be your platelet cutoff?

$\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Question 3 - Gestational Thrombocytopenia

What would your platelet cutoff be for placing a labor epidural if the diagnosis was gestational thrombocytopenia?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if the patient is at high risk for cesarean delivery?
(e.g., a patient with a category II tracing, IUGR, or unstable fetal lie)

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a spinal anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a combined spinal-epidural anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would any of your answers change if the patient had an unfavorable airway?
If yes, please answer only the following questions where an unfavorable airway would lead you to choose a different platelet count.

- Yes No

If your platelet cutoff changes for placing a labor epidural if the diagnosis was gestational thrombocytopenia, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when this patient is at high risk for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when you are planning a spinal anesthetic for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes for you are planning a combined spinal-epidural anesthetic for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Question 4 - Preeclampsia

What would your platelet cutoff be for placing a labor epidural if the thrombocytopenia was related to preeclampsia?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if the patient is at high risk for cesarean delivery? (e.g., a patient with a category II tracing, IUGR, or unstable fetal lie)

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a spinal anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a combined spinal-epidural anesthetic for cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if the patient has preeclampsia with severe features, with rapidly dropping platelet count requiring urgent cesarean delivery?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Would any of your answers change if the patient had an unfavorable airway?
 If yes, please answer only the following questions where an unfavorable airway would lead you to choose a different platelet count.

- Yes No

If your platelet cutoff changes when placing a labor epidural if the thrombocytopenia was related to preeclampsia, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when the patient is at high risk for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when you are planning a spinal anesthetic for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when you are planning a combined spinal-epidural anesthetic for cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

If your platelet cutoff changes when the patient has preeclampsia with severe features, with rapidly dropping platelet count requiring urgent cesarean delivery, what would be your platelet cutoff?

- $\geq 100,000 \times 10^6/L$
 $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 Other

If other, please indicate platelet cutoff

Question 5 - Scenario

A new patient arrives on the labor floor, a 35 year old G1P0 presents with spontaneous onset of labor without prior labs and complete blood count at admission shows thrombocytopenia. She has no history of bleeding or current physical signs. She is not aware that she has thrombocytopenia and has never had a hematologic consult.

- $\geq 100,000 \times 106/L$
 $\geq 80,000 \times 106/L$
 $\geq 70,000 \times 106/L$
 $\geq 50,000 \times 106/L$
 Other

What would your platelet cutoff be for placing a labor epidural?

If other, please indicate platelet cutoff

Would you require a PT/aPTT prior to making your anesthetic decision?

- Yes No

Would your platelet cutoff change for placing a labor epidural if she had a history of prior surgery without significant bleeding?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 106/L$
 $\geq 80,000 \times 106/L$
 $\geq 70,000 \times 106/L$
 $\geq 50,000 \times 106/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if the patient is at high risk for cesarean delivery? (e.g., a patient with a category II tracing, IUGR, or unstable fetal lie)

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 106/L$
 $\geq 80,000 \times 106/L$
 $\geq 70,000 \times 106/L$
 $\geq 50,000 \times 106/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a spinal anesthetic for a planned cesarean delivery (for this patient)?

- Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 106/L$
 $\geq 80,000 \times 106/L$
 $\geq 70,000 \times 106/L$
 $\geq 50,000 \times 106/L$
 Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if you are planning a combined spinal epidural anesthetic as opposed to a spinal anesthetic (for this patient)?

Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
- $\geq 80,000 \times 10^6/L$
- $\geq 70,000 \times 10^6/L$
- $\geq 50,000 \times 10^6/L$
- Other

If other, please indicate platelet cutoff

Would your platelet cutoff change if the patient has morbid obesity, an unfavorable airway, and requires urgent cesarean delivery?

Yes No

If so, what would your platelet cutoff be?

- $\geq 100,000 \times 10^6/L$
- $\geq 80,000 \times 10^6/L$
- $\geq 70,000 \times 10^6/L$
- $\geq 50,000 \times 10^6/L$
- Other

If other, please indicate platelet cutoff

Question 6

Is there a clinical situation (not already mentioned) that would cause you to choose a lower platelet count range?

Yes No

If so, please list all circumstances.

Question 7 - Coagulation Studies

The following questions ask if you use coagulation studies (PT/INR/PTT) at the time of procedure to assess safety for regional anesthesia in thrombocytopenic patients. Do you routinely use coagulation studies for these patients?

Yes No

If yes, please check off the diagnoses in which you order coagulation studies (please check off any or all selections)

Preeclampsia Gestational
Thrombocytopenia ITP
 Unknown diagnosis

If yes for preeclampsia, what is your platelet cutoff for ordering coagulation studies?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

If yes for gestational thrombocytopenia, what is your platelet cutoff for ordering coagulation studies?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

If yes for ITP, what is your platelet cutoff for ordering coagulation studies?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

If yes for unknown diagnosis, what is your platelet cutoff for ordering coagulation studies?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

Question 8

The following question(s) ask if you use thromboelastography (TEG) or rotational thromboelastometry (ROTEM) to assess safety for regional anesthesia in thrombocytopenic patients. Do you routinely use TEG and ROTEM for these patients?

Yes No

If yes, please check off diagnoses in which you order TEG or ROTEM (please check off any or all selections)

Preeclampsia Gestational Thrombocytopenia ITP
 Unknown diagnosis

If yes for preeclampsia, what would be your platelet cutoff for performing TEG or ROTEM?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

If yes for gestational thrombocytopenia, what would be your platelet cutoff for performing TEG or ROTEM?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

If yes for ITP, what would be your platelet cutoff for performing TEG or ROTEM?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

If yes for unknown diagnosis, what would be your platelet cutoff for performing TEG or ROTEM?

< 100,000 x 10⁶/L
 ≤ 80,000 x 10⁶/L
 ≤ 70,000 x 10⁶/L
 ≤ 50,000 x 10⁶/L
 Other

If other, please indicate platelet cutoff

Question 9

Do you consider giving a platelet transfusion prior to neuraxial technique in thrombocytopenic patients (< 100,000 x 106/L)?

Yes No

If yes, please check off diagnoses in which you would consider transfusing platelets prior to a neuraxial technique (check any or all selections)

Preeclampsia Gestational Thrombocytopenia ITP
 Unknown diagnosis

If yes for preeclampsia, what would your platelet cutoff be to consider a platelet transfusion prior to a neuraxial technique?

< 100,000 x 106/L
 ≤ 80,000 x 106/L
 ≤ 70,000 x 106/L
 ≤ 50,000 x 106/L
 Other

If other, please indicate platelet cutoff

If yes for gestational thrombocytopenia, what would your platelet cutoff be to consider a platelet transfusion prior to a neuraxial technique?

< 100,000 x 106/L
 ≤ 80,000 x 106/L
 ≤ 70,000 x 106/L
 ≤ 50,000 x 106/L
 Other

If other, please indicate platelet cutoff

If yes for ITP, what would your platelet cutoff be to consider a platelet transfusion prior to a neuraxial technique?

< 100,000 x 106/L
 ≤ 80,000 x 106/L
 ≤ 70,000 x 106/L
 ≤ 50,000 x 106/L
 Other

If other, please indicate platelet cutoff

If yes for unknown diagnosis, what would your platelet cutoff be to consider a platelet transfusion prior to a neuraxial technique?

< 100,000 x 106/L
 ≤ 80,000 x 106/L
 ≤ 70,000 x 106/L
 ≤ 50,000 x 106/L
 Other

If other, please indicate platelet cutoff

Hematology Delphi

Please complete the survey below.

Thank you!

Question 1

What are the important major diagnostic categories of thrombocytopenia that are most relevant to discuss in the thrombocytopenia in pregnancy/neuraxial anesthesia recommendations (please check all that apply):

- Gestational Thrombocytopenia
- ITP
- Congenital Thrombocytopenia
- Thombocytopenia associated with systemic disorders - pregnancy related
- Thromboytopenia associated with systemic disorders - non-pregnancy related
- Pseudothrombocytopenia
- Newly recognized thrombocytopenia on admission for delivery
- Other

Please select all pregnancy related thrombocytopenia associated systemic disorders that apply

- Preeclampsia with severe features
- HELLP syndrome
- Acute fatty liver of pregnancy

Please select all NON-pregnancy related thrombocytopenia associated systemic disorders that apply

- Viral induced (HIV, hepatitis, CAPS)
- Drug induced
- Autoimmune disease-related (eg. SLE)
- Thrombotic Microangiopathy (TTP, aHUS)
- Bone marrow disorder
- Coagulopathy (DIC)
- VWD 2

If other, please specify

Question 2

If feasible, please indicate which of these disorders typically have normal platelet function in the absence of additional comorbid disease (please check all that apply):

- Gestational Thrombocytopenia
- ITP
- Congenital Thrombocytopenia
- Thombocytopenia associated with systemic disorders - pregnancy related
- Thromboytopenia associated with systemic disorders - non-pregnancy related
- Pseudothrombocytopenia
- Newly recognized thrombocytopenia on admission for delivery
- Other

Please select all pregnancy related thrombocytopenia associated systemic disorders that apply

- Preeclampsia with severe features
- HELLP syndrome
- Acute fatty liver of pregnancy

Please select all NON-pregnancy related thrombocytopenia associated systemic disorders that apply

- Viral induced (HIV, hepatitis, CAPS)
- Drug induced
- Autoimmune disease-related (eg. SLE)
- Thrombotic Microangiopathy (TTP, aHUS)
- Bone marrow disorder
- Coagulopathy (DIC)
- VWD 2

If other, please specify

Question 3

For the scenarios below, please assume that the patient is without additional comorbidities, that she has a BMI = 30 and a favorable airway. The context is a cesarean delivery (non-urgent) unless otherwise stated.

For a term pregnant patient is it reasonable to have a lower platelet cutoff for a spinal anesthetic (single injection after the spinal space is found, 25 gauge, atraumatic needle, no catheter thread) than for an epidural anesthetic (17 gauge needle, small flexible catheter left in the vascular epidural space) if she has gestational thrombocytopenia?

- Yes
 No
 Unable to answer the question (please specify reason)

If yes, what is the lowest platelet cutoff you could imagine being acceptable for the spinal anesthesia?

- $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 60,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 $\geq 40,000 \times 10^6/L$

Please specify reason

For a term pregnant patient is it reasonable to have a lower platelet cutoff for a spinal anesthetic (single injection after the spinal space is found, 25 gauge, atraumatic needle, no catheter thread) than for an epidural anesthetic (17 gauge needle, small flexible catheter left in the vascular epidural space) if she has been diagnosed with ITP?

- Yes
 No
 Unable to answer the question (please specify reason)

If yes, what is the lowest platelet cutoff you could imagine being acceptable for the spinal anesthesia?

- $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 60,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 $\geq 40,000 \times 10^6/L$

Please specify reason

For a term pregnant patient is it reasonable to have a lower platelet cutoff for a spinal anesthetic (single injection after the spinal space is found, 25 gauge, atraumatic needle, no catheter thread) than for an epidural anesthetic (17 gauge needle, small flexible catheter left in the vascular epidural space) if she has been diagnosed with severe features?

- Yes
 No
 Unable to answer the question (please specify reason)

If yes, what is the lowest platelet cutoff you could imagine being acceptable for the spinal anesthesia?

- $\geq 80,000 \times 10^6/L$
 $\geq 70,000 \times 10^6/L$
 $\geq 60,000 \times 10^6/L$
 $\geq 50,000 \times 10^6/L$
 $\geq 40,000 \times 10^6/L$

Please specify reason

Question 4

A G1P0 woman at 36 weeks with preeclampsia with severe features (headache, proteinuria) is being sent from the inpatient antepartum service to the labor floor for delivery. Her fetus is breech so she will require a cesarean delivery. Her platelet count yesterday was $99,000 \times 10^6$. Platelet count at 28 weeks gestation was $160,000 \times 10^6$. Repeat labs are being sent prior to her procedure. The obstetricians would like to do the cesarean delivery as soon as possible, although it is not an emergency.

A repeat complete blood count and liver function tests (transaminases, LDH) were ordered. Are there any additional laboratory tests that you feels are specifically required before proceeding with a spinal or epidural anesthetic?

Yes No

If yes, please specify

Question 5

A G1P0 woman at 36 weeks was just admitted this morning with mild range hypertension and epigastric pain. Her new laboratory tests reveal liver function tests (transaminases) in the 150's, mildly elevated LDH, normal glucose, and a platelet count of $80,000 \times 10^6$. Her platelet count yesterday evening was $120,000 \times 10^6$. She is diagnosed with HELLP syndrome and scheduled for immediate induction of labor. The anesthesia team would like to do a labor epidural procedure now, before her platelet count declines further. Their plan would be to wait to remove the epidural catheter until after she has delivered, and her platelet count rebounds.

Are there any additional laboratory tests that you think are essential in this setting prior to proceeding with this procedure?

Yes No

If yes, please specify

In your expert opinion, is it reasonable to proceed with the labor epidural procedure as proposed?

Yes No

If no, please explain

Question 6

For the patient that is newly found to have thrombocytopenia (platelet count $80,000 \times 10^6$) on admission for delivery (no previous laboratory values available):

What are the most important questions to ask the patient? (please check all that apply)

- Bleeding challenges and outcomes
- Spontaneous bleeding (eg mucocutaneous bleeding)
- History of heavy menses
- Other

Please check all bleeding challenges and outcomes that apply

- Prior surgery (including cesarean)
- Prior vaginal delivery
- Prior spinal or epidural anesthetic
- Prior wisdom tooth extraction
- Prior transfusions for bleeding events

If other, please specify

What additional laboratory tests would you order for which the results would typically be available in 1 hour?

Question 7

Please add any additional thoughts and comments here:
