Appendix 1. Characteristics of 17 Pregnant Women With Confirmed Prenatal Zika Virus Infection and Ultrasound Findings Consistent With Congenital Zika Syndrome in the Fetus, Barranquilla and Ibagué, Colombia, 2015–2016

| Patient<br>Number | Age<br>category<br>(years) | Obese,<br>>30<br>kg/m² | Gravida/<br>Para | Gestational<br>age at time of<br>Zika<br>symptoms | Maternal<br>Zika<br>symptoms           | First ultrasound<br>with head<br>circumference,<br>weeks since<br>Zika symptoms | Zika virus<br>RNA<br>positive<br>samples<br>(weeks of<br>gestation) | Zika<br>virus<br>RNA<br>negative<br>samples |
|-------------------|----------------------------|------------------------|------------------|---|--|---|---|---|
| 1                 | 25-29                      | Yes                    | 2/1              | 7 weeks   | Rash, fever                            | 9 weeks after<br>Zika   | Infant serum  | N/A   |
| 2                 | <20                        | No                     | 1/0              | 8 weeks   | Rash,<br>conjunctivitis,<br>arthralgia | 20 weeks after<br>Zika  | Maternal<br>serum (12)  | N/A   |
| 3                 | 25-29                      | No                     | 1/0              | 8 weeks   | Rash                                   | 13 weeks after<br>Zika  | Maternal<br>serum (10)  | Amniotic<br>fluid (26<br>weeks)             |
| 4                 | <20                        | No                     | 1/0              | 9 weeks   | Rash, fever                            | 2 weeks after<br>Zika   | Amniotic<br>fluid (37)  | N/A   |
| 5                 | ≥30                        | Yes                    | 1/0              | 10 weeks  | Rash, fever                            | 1 week after<br>Zika  | Amniotic<br>fluid (32)  | Maternal<br>serum                           |
| 6                 | 20-24                      | No                     | 2/0              | 10 weeks  | Rash, fever                            | 4 days after Zika   | Placenta,<br>umbilical<br>cord                                      | N/A   |
| 7                 | 25-29                      | No                     | 1/0              | 10 weeks  | Rash, pruritus                         | 5 weeks after<br>Zika   | Maternal<br>serum   | N/A   |
| 8                 | ≥30                        | No                     | 4/3              | 11 weeks  | Rash,<br>conjunctivitis                | 5 weeks after<br>Zika   | Umbilical<br>cord   | Placenta                                    |
| 9                 | 20-24                      | No                     | 1/0              | 12 weeks  | Rash, fever                            | 1 week after<br>Zika  | Placenta,<br>urine, cord<br>blood                                   | Umbilical<br>cord                           |
| 10                | 25-29                      | No                     | 1/0              | 12 weeks*   | Rash, pruritus                         | 8 weeks after<br>Zika   | Umbilical<br>cord,<br>placenta                                      | Urine                                       |
| 11                | 20-24                      | No                     | 1/0              | 13 weeks*   |  | 3 weeks after<br>Zika   | Amniotic<br>fluid (34)  | N/A   |

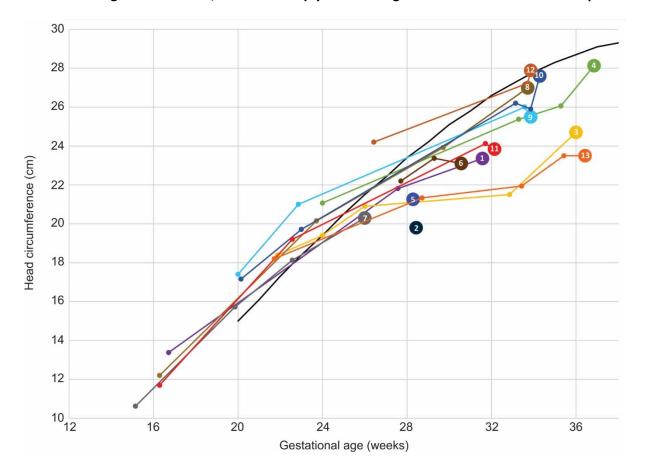
Parra-Saavedra M, Reefhuis J, Piraquive JP, Gilboa SM, Badell ML, Moore CA, et al. Serial head and brain imaging of 17 fetuses with confirmed zika virus infection in Colombia, South America. Obstet Gynecol 2017; 130.

The authors provided this information as a supplement to their article.

| 12 | 20-24 | No  | 1/0 | 13 weeks      | Rash, fever  | 6 weeks after<br>Zika                | Placenta               | Maternal serum, umbilical cord |
|----|-------|-----|-----|---------------|--|--------------------------------------|------------------------|--------------------------------|
| 13 | <20   | No  | 1/0 | 13 weeks      | Rash, fever,<br>arthralgia,<br>pruritus                              | 8 weeks after<br>Zika                | Amniotic<br>fluid (22) | Maternal<br>serum              |
| 14 | ≥30   | Yes | 1/0 | 14 weeks      | Rash, fever,<br>conjunctivitis,<br>arthralgia,<br>pruritus,<br>edema | 5 weeks after<br>Zika                | Amniotic<br>fluid (34) | N/A                            |
| 15 | <20   | No  | 1/0 | Asymptomatic  |  | 26 weeks<br>gestation <sup>†</sup>   | Amniotic<br>fluid (28) | N/A                            |
| 16 | 25-29 | No  | 3/1 | Asymptomatic* |  | 14 weeks<br>gestation <sup>†</sup> , | Amniotic<br>fluid (20) | N/A                            |
| 17 | 20-24 | No  | 1/0 | Asymptomatic  |  | 29 weeks<br>gestation <sup>†</sup> , | Amniotic<br>fluid (33) | N/A                            |

<sup>\*</sup> Partner had Zika virus symptoms during pregnancy, <sup>†</sup> asymptomatic patients, reasons for follow up: patient 15--threatened abortion at gestational week 7; patient 16--vanishing twin at week 8; and patient 17--small for gestational age at 29 weeks.

Appendix 2. Sequential ultrasound head circumference measurement relative to the -3 standard deviations based on Intergrowth 21<sup>st</sup> (black line) for 13 pregnancies with first-trimester Zika virus symptoms and postnatal evidence of congenital Zika syndrome in the infant, Barranquilla and Ibagué, Colombia, 2015–2016. Head circumference measures below the black line indicate microcephaly; for that gestational age the measure is more than 3 standard deviations below the mean based on Intergrowth 21<sup>st</sup> fetal growth standards. The linear connectors between the ultrasound measurements are intended to guide the reader, and do not imply linear changes between the observed data points.



Appendix 3. Summary of Published Case Series Reports on Timing of Prenatal Microcephaly Diagnosis

in Pregnancies Affected by Zika Virus Infection

| in Pregnancies Affected | by Zika virus | intection         |              |             |              |
|-------------------------|---------------|-------------------|--------------|-------------|--------------|
|                         | Gestational   |                   | Ultrasound   | Any         |              |
| Author (reference)      | age at Zika   |                   | without      | abnormality | Microcephaly |
| and case number of      | virus         | Zika virus        | microcephaly | detected    | diagnosed    |
| informative cases       | exposure      | diagnostics       | (weeks)      | (weeks)     | (weeks)      |
| Mlakar (24), one case   | 13            | Symptoms only     | 14, 20       | 29          | 32           |
| Brasil (22)             |               | 82% of women      |              |             |              |
|                         | _             | were positive by  |              |             |              |
| Fetus 19                | 8             | polymerase        |              |             | 35           |
| Fetus 24                | 12            | chain reaction in |              |             | 29           |
|                         |               | blood, urine or   |              |             |              |
|                         |               | both              |              |             |              |
| Calvet (3)              |               |                   |              |             |              |
| Case 1                  | 18            | Amniotic fluid    | 16           |             | 21           |
| Case 2                  | 10            | 28 wks            | 22           |             | 25           |
| Cusc 2                  | 10            | Amniotic fluid    | 22           |             | 23           |
|                         |               | 28 wks            |              |             |              |
| Carvalho (9)            |               |                   |              |             |              |
| Fetus 1                 | 8             | Symptoms          |              |             | 28           |
| Fetus 2                 | 8             | Symptoms          |              |             | 31           |
| Fetus 3                 | 9             | RT-PCR positive   |              |             | 31           |
| Fetus 4                 | 11            | Symptoms          |              |             | 36           |
| Fetus 5                 | 8             | Symptoms          |              |             | 37           |
| Fetus 6                 | 10            | Symptoms          |              |             | 38           |
| Fetus 7                 | 16            | Fever             |              |             | 38           |
| Fetus 8                 | 8             | Fever             |              |             | 28           |
| Fetus 13                | 11            | Symptoms          |              |             | 27           |

Parra-Saavedra M, Reefhuis J, Piraquive JP, Gilboa SM, Badell ML, Moore CA, et al. Serial head and brain imaging of 17 fetuses with confirmed zika virus infection in Colombia, South America. Obstet Gynecol 2017; 130.

The authors provided this information as a supplement to their article.

| Fetus 14                | 16 | Symptoms                                |            |    | 29    |
|-------------------------|----|---|------------|----|-------|
| Fetus 15                | 10 | Symptoms                                |            |    | 28    |
| Fetus 18                | 9  | Symptoms                                |            |    | 22    |
| Driggers (23), one case | 12 | IgM+/IgG+                               | 13, 16, 17 | 19 | *     |
| Werner (25), one case   | 12 |   | 12, 21     |    | 32    |
| Soares (11)             |    |   |            |    |       |
| Confirmed1              | 6  | Amniotic fluid                          | 17-20 (1)  |    | 25-30 |
| Confirmed2              | 8  | Amniotic fluid                          | 14-30 (4)  |    | 31-35 |
| Confirmed4              | 10 | Amniotic fluid                          | 21-35 (2)  |    | ≥36   |
| Confirmed7              | 12 | Amniotic fluid                          | 17-20 (1)  |    | 25-30 |
| Confirmed8              | 18 | Amniotic fluid,<br>cord blood,<br>brain | 17-30 (2)  |    | 31-35 |
| Confirmed11             | 12 | Brain                                   | 21-35 (3)  |    | ≥36   |
| Confirmed12             | 10 | Cord blood                              | 14-24 (3)  |    | ≥36   |
| Confirmed13             | 12 | Cord blood                              | 17-20 (1)  |    | ≥36   |
| Presumed2               | 6  | Symptoms (rash)                         | 14-30 (3)  |    | 31-35 |
| Presumed3               | 6  | Symptoms (rash)                         |            |    | 31-35 |
| Presumed5               | 8  | Symptoms (rash)                         | 17-24 (2)  |    | 25-30 |
| Presumed6               | 8  | Symptoms (rash)                         |            |    | ≥36   |
| Presumed7               | 8  | Symptoms (rash)                         | 17-24 (2)  |    | 31-35 |
| Presumed9               | 10 | Symptoms (rash)                         | 21-24 (1)  |    | 31-35 |
| Presumed11              | 11 | Symptoms (rash)                         |            |    | 31-35 |

Parra-Saavedra M, Reefhuis J, Piraquive JP, Gilboa SM, Badell ML, Moore CA, et al. Serial head and brain imaging of 17 fetuses with confirmed zika virus infection in Colombia, South America. Obstet Gynecol 2017; 130.

The authors provided this information as a supplement to their article.

<sup>©2017</sup> American College of Obstetricians and Gynecologists.

| Presumed14            | 12         | Symptoms (rash) |    | ≥36         |
|-----------------------|------------|-----------------|----|-------------|
| Presumed15            | 12         | Symptoms (rash) |    | 25-30       |
| Vorona (26), one case | 7          | Serum, Amniotic | 16 | 21          |
|                       |            | fluid           |    |             |
|                       |            |                 |    |             |
| TOTAL: 37 fetuses     | Median: 10 |                 |    | Median: 32  |
|                       |            |                 |    |             |
|                       | Range 6-18 |                 |    | Range 21-38 |
|                       |            |                 |    | J           |

<sup>\*</sup> A reduction from 47<sup>th</sup> to 24<sup>th</sup> percentile head circumference was observed from 16 -20 weeks gestation, pregnancy was terminated at 21 weeks