

# How to Detect Microcephaly Caused by Zika with Ultrasound



## Zika Causes Birth Defects

Zika virus is a mosquito-borne flavivirus, which is classified as **the same category of concern as Ebola** by the WHO (World Health Organization) alert.

Zika virus causes **microcephaly**, a prime threat to most pregnant women around the world. This condition causes a baby to have **a smaller head with developmental issues** ranging from mild to severe.

**Baby with microcephaly**

\*Image courtesy of CDC: Centers for Disease Control and Prevention

**The Spread Of The Zika Virus**

Countries and territories with active Zika virus transmission\* and reported cases

- Reported active transmission
- Zika case(s) currently reported
- Zika reports prior to 2015

**Brazil alone has around 4,000 reported cases of microcephaly** since October, 2015.

\*For information about the effects of Zika virus infection during pregnancy, visit CDC's web page: <http://www.cdc.gov/zika/pregnancy/index.html>



## ISUOG Guideline

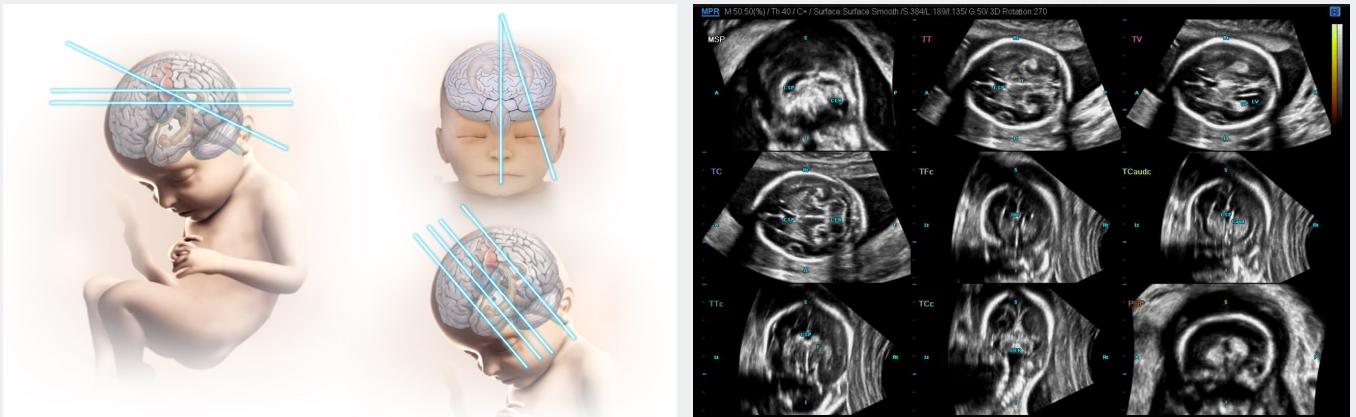
To help doctors make more accurate diagnosis of pregnant women, the ISUOG (International Society of Ultrasound in Obstetrics and Gynecology) announced a guideline on March, 2016. It suggests to take **a neurosonography** for cases where **ultrasound assessment shows a fetal HC (Head Circumferences) of 2 SD below the expected mean for gestational age.**

\*Full Guideline (ISUOG Interim Guidance on ultrasound for Zika virus infection in pregnancy): [http://www.isuog.org/NR/rdonlyres/7955960E-6279-4F77-A70C-552E23834AE5/0/UOG\\_15896\\_REV2\\_EV1.pdf](http://www.isuog.org/NR/rdonlyres/7955960E-6279-4F77-A70C-552E23834AE5/0/UOG_15896_REV2_EV1.pdf)

## Samsung 5D CNS+

Samsung ultrasound system for women's health, **WS80A with Elite** provides advanced neurosonography feature, **5D CNS+**, to improve capability of diagnosing anomalies of fetal brain. With only two clicks, 5D CNS+ extracts **all diagnostic planes suggested by ISUOG guideline** with anatomical landmarks and biometric measurements.

- 9 views of axial, coronal and sagittal planes
- 6 measurements (HC, BPD, OFD, Vp, CEREB, CM)



### Key Advantages

- Diagnostic efficacy** ➤ Provides additional anatomic information to identify the structural anomalies and defects
- Easy of Use** ➤ Simplifies fetal brain assessment and improves workflow efficiency
- Standardization** ➤ Reduces inter-observer variability of acquiring 9 diagnostic planes

#### Other References:

Statista: <https://www.statista.com/chart/4322/the-spread-of-the-zika-virus>

WHO: <http://www.who.int/emergencies/zika-virus/en/>

Centers for Disease Control and Prevention (CDC): <http://www.cdc.gov/zika/pregnancy/index.html>