Zika virus tissue sampling protocol's purpose defined through algorithm in anatomic pathology for trainees

Since 2016, United States (US) Zika virus (ZIKV) transmission provoked our pathology residents, and pathologists' assistant students to follow fetal and placental tissue sampling protocols recommended by the Center for Disease Control (CDC). As tissue collection increased at our institution located in Texas, an ongoing local transmitter and inundated by Hurricane Harvey which offered additional breeding grounds for vectors, unpublished data emerged at our institution suggesting viral presence in fetal and placental tissue without maternal viral positivity implying the importance of adequate training regarding prosection and sampling. Current research demonstrated that ZIKV persisted in fetal tissue resulting in Congenital Zika Syndrome. Unbeknownst of recent findings, learners procuring samples required repeated updated protocol review and often questioned purpose behind submission to the CDC. In response, we designed two traditional algorithms combining our work flow and resources beginning with identifying presumed ZIKV transmitted specimens to receiving verification of ZIKV infection and the repercussions thereafter. This systematic approach was presented during resident and pathologists' assistant student orientation and reviewed during macroscopic inspection and prosection, known as grossing, of placentas, products of conception and autopsy organ blocks. As a result, residents and pathologists' assistant students proffered adequate sampling and understood its gravity. In our lab, all past medical histories of received specimens were evaluated by pathology staff without relying only upon the submitting physician's direction to retain tissue. More suspected tissue was sequestered for possible studies when, in the past, this tissue may have otherwise been disposed of following standard final diagnosis. In conclusion, our algorithms became indispensable learning devices for our trainees and will remain as a dynamic teaching tool. By generating a well-defined, customized, condensed ZIKV transmitted tissue protocol specific to our institution to include current emerging discoveries, gross inspectors and autopsy prosectors will remain updated and continue their vital role in continuity of care for those afflicted by ZIKV.

Biography
Kristine McCluskey is lead PA and both a pathology residency and a pathologists' Assistant Program Instructor with expertise in macroscopic pathology. She received the Baylor College of Medicine’s Fulbright and Jaworski, LLP Faculty Excellence Award in Teaching and Evaluation. She conducts monthly workshops and directed her first symposium for continuing medical education credit accredited by the American Society for Clinical Pathology pertaining to macroscopic disease at a local and national level. She has spoken at national conferences regarding her field in academic medicine and surgical specimen processing. Her educational tools have been published and she plans to pursue a doctorate in health science education. Her research interests include medical education curriculum development and breast cancer.