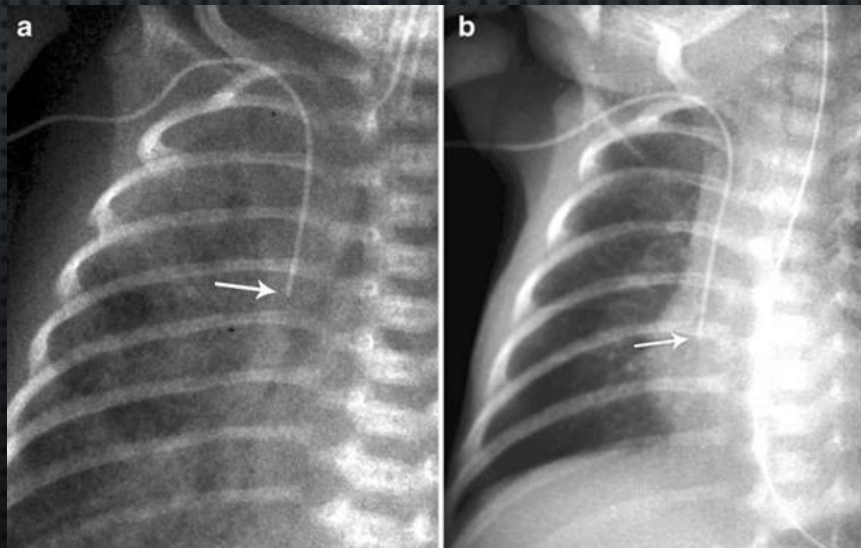


The leading cause of death among newborns in the United States is due to being born before the 40<sup>th</sup> gestational week, and the complications which can be attributed to not fully developing within the womb (Rodriguez, 2016).

## RADIOGRAPHY & PRE-TERM INFANTS

When looking for structural abnormalities of the brain, MRI is considered the imaging modality of choice (Hye-Kyung et al. 2015). The MRI scans are able to detect the presence or the lack of white matter in the brain which controls psychomotor function (Tzarouchi et al. 2015).



Central venous catheters are frequently used in the neonatal setting to administer nutrition, fluids, and medication (Beluffi et al. 2012). Central venous catheters can be inserted into the arm, jugular, scalp, or lower limb vein; however, the positioning of the tip is very important (Beluffi et al. 2012).

**Figure A: Placement of catheter in distal superior vena cava**  
**Figure B: Placement in the right atrium**

“Central Venous Catheters in Premature Babies: Radiological Evaluation, Malpositioning and Complications,” by Beluffi et al. 2012, *Pediatric Radiology*, 42(8), 10000-10008.

Cassady, C., Logsdon, G., Varich, L., & O'Dell, M. C. (2015). Cinegraphic versus combined static and cinegraphic imaging for initial cranial ultrasound screening in premature infants. *Pediatric Radiology*, 45(11), 1706-1711.

Ultrasonography is frequently used on the preterm infant population because it conducts an internal study without the use of any ionizing radiation, it is portable, and cost effective compared to other more invasive modalities (Cassady et al. 2015). Cranial ultrasounds are done routinely after an early birth to look for brain hemorrhages (Cassady et al. 2015).

Hye-Kyung, Y., Seong Whi, C., Yoon, H., & Cho, S. W. (2016). Neonatal head ultrasound: Systematic approach to congenital central nervous system anomalies. A pictorial essay. *Medical Ultrasonography*, 18(3), 386-393