

# MR IMAGING OF THE PRETERM BRAIN

*safer better faster stronger*

1. The extent of structural brain injuries, microstructural tissue abnormalities and global volume reductions, detected on neonatal MRI scans in preterm infants, is directly related to the level of neuro-motor and neuro-cognitive performance in childhood. (this thesis)
2. Adverse events after early MRI procedures are common and should not be underestimated. The use of a dedicated guideline for such procedures is essential and must include time out procedures and systematic incident review. (this thesis)
3. A well-informed choice of diffusion tensor estimation methodology is crucial and has significant impact on subsequent analyses of studying microstructural brain properties. (this thesis)
4. The limited clinical utility of brain DTI templates to provide reference values of normal development due to the lack of standardized DT-MRI acquisition might be overcome by using those templates site- and population-specifically. (this thesis)
5. Advanced serial cranial ultrasonography and MRI are both needed to detect common patterns of preterm brain injury. Clinical feasibility of MRI is limited for critically ill preterm infants and needs to be addressed. (this thesis)
6. The departure from traditional clinical trial frameworks towards personalized medicine should facilitate procedural streamlining and enhance clinical and economic effectiveness. (N Engl J Med, 2012)
7. Although perinatal mortality is suggested to be reduced since the introduction of perinatal audit, the effect depends on the ability to close the audit loop; without effectively implementing the solutions to the problems identified, audit alone cannot improve quality of care. (Int J Gynaecol Obstet, 2009)
8. The increasing evidence for neurobiological underpinnings of psychopathy, as demonstrated with functional MRI studies, has given rise to a fairly controversial and hot tempered debate regarding the justification of punishment of criminal behavior, especially with respect to the concepts of free will and volitional control. (Neurocase, 2008)
9. The application of forced immobilization and physical restraint is increasingly considered as inhuman and unacceptable in non-lifesaving procedures. (Minerva Pediatr, 2009)
10. Pleasure is a complex neurobiological phenomenon that is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. (Neuro Endocrinol Lett, 2004)
11. Live as if you were to die tomorrow. Learn as if you were to live forever. (Mahatma Gandhi)