



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Diagnostics

National Capital Consortium TBI Neuroimaging Core Project

NICoE is sponsoring the National Capital Consortium TBI Neuroimaging Core Project to develop a state-of-the-art imaging center for assessing TBI and to close existing knowledge gaps in the relationships between TBI imaging findings and clinical outcomes. To date, advanced neuroimaging data have been acquired from over 900 TBI patients and 50 controls. In a systematic review of the imaging data, punctuate T2 hyperintense regions were the most common brain lesion in patients with mTBI. Results suggest that high resolution 3T MRI may show lesions not detectable on routine clinical scans. Developing this large database may allow scans from a single individual to be compared to population-average templates derived from healthy controls to identify abnormalities and subcategories of disease. Findings from the MRI image analysis have informed the development of CPGs for imaging TBI in the military that were adopted by DCoE, DVBIC, and VA.