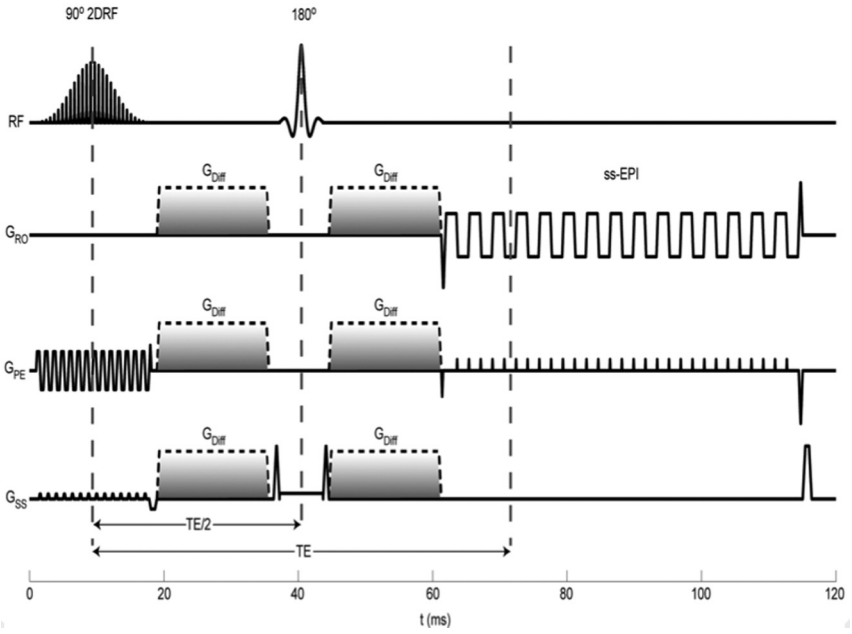
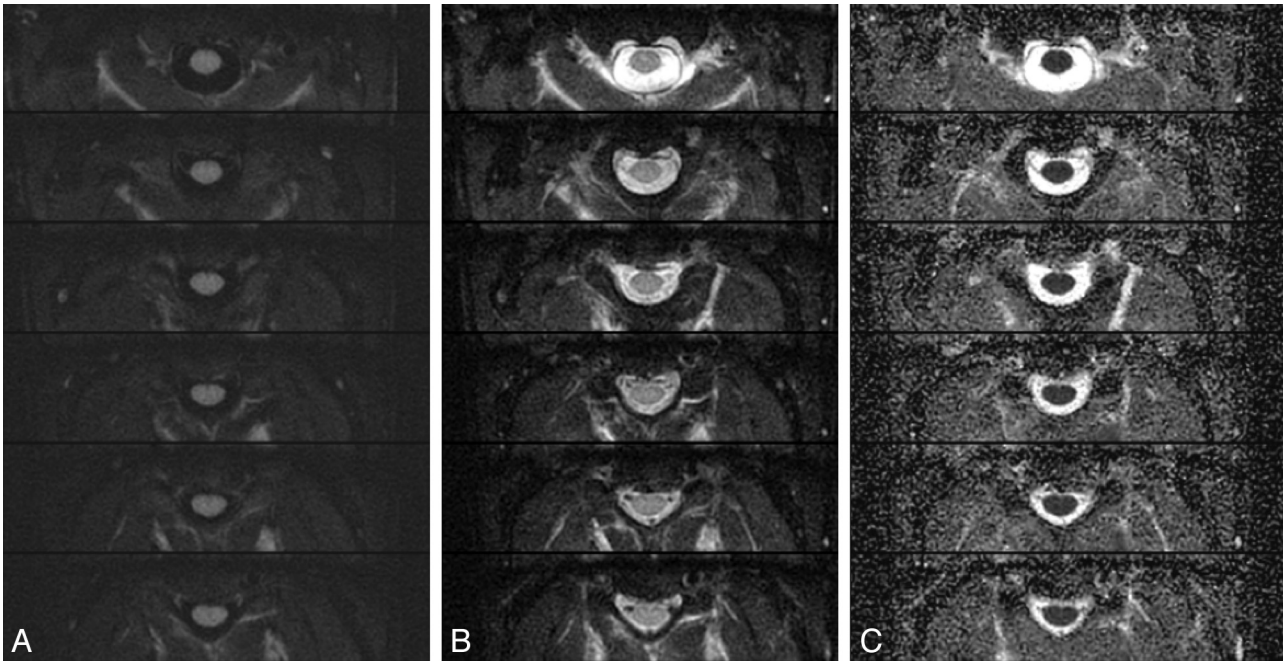
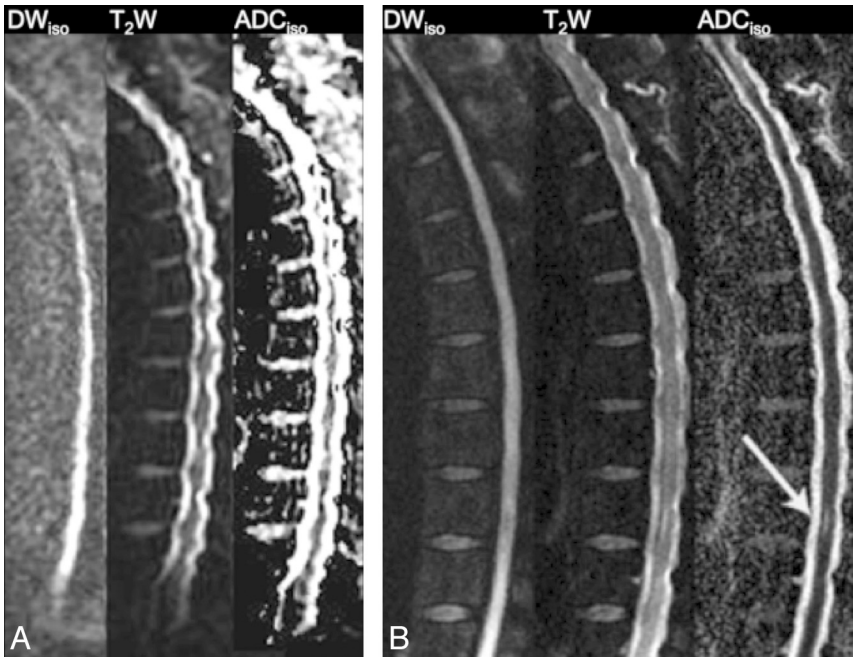


On-line Fig 1. Example of the pulse sequence timing diagram for the rFOV DWI sequence. Further information can be found in reference 45.



On-line Fig 2. Example of axial rFOV DWI in a 53-year-old man with history of trauma: isoDWI (*A*), B0 (*B*), and ADC images (*C*) demonstrate less distortion than our standard fFOV axial imaging. Six 6-mm-thick sections could be acquired, such that it was necessary to focus the axial examination to a specific ROI based on prior sagittal images.



On-line Fig 3. A 49-year-old man who had a thoracic spine MR imaging examination to evaluate lumbar nerve sheath tumors. rFOV DWI (*A*) compared with fFOV DWI (*B*). The rFOV image demonstrates higher spatial resolution and reduced susceptibility artifacts. This allows the identification of a small central fluid structure (arrow) with low DWI signal intensity and high ADC signal intensity in the distal thoracic spinal cord, the terminal ventricle, on the rFOV images.

On-line Fig 4. A 57-year-old man with known type B aortic dissection and more recent history of acute onset paraparesis and chest pain radiating to back. *A*, STIR image demonstrates central high signal intensity between T5 and T8. *B*, rFOV DWI demonstrates high signal intensity in the same region, with corresponding low ADC values (*C*).