

### *Detailed MRI protocol*

MRI was performed on a Philips Ingenia 3 Tesla system using dS HeadNeckSpine coil configuration (Philips Healthcare, Best, Netherlands). In 84 of the 461 (18%) cases, we used an older protocol consisting of axial T2 TSE (slice thickness 3 mm, TE=80 ms, TR=3203 ms), coronal T2 SPAIR (slice thickness 3 mm, TE=80 ms, TR=3608 ms), sagittal T1 TSE (slice thickness 3 mm, TE=16 ms, TR=641 ms), axial DWI (slice thickness 4 mm, TE=86 ms, TR=4843 ms, b-value 1000 s/mm<sup>2</sup>), axial T1 SPIR after Gd (slice thickness 3 mm, TE=18 ms, TR=651 ms), and coronal T1 TSE after gadolinium (Gd) (slice thickness 3 mm, TE=16 ms, TR=604 ms). In the majority of the cases (377 of 461, 82%), we used a novel protocol consisting of axial T1 TSE (slice thickness 4 mm, TE=10 ms, TR=641 ms), axial T2 TSE Dixon (slice thickness 4 mm, TE=100 ms, TR=3021 ms), coronal T2 TSE Dixon (slice thickness 3.5 mm, TE=80 ms, TR=3210 ms), axial DWI (slice thickness 4 mm, TE=87 ms, TR=3981 ms, b-value 1000 s/mm<sup>2</sup>), and three T1 TSE Dixon sequences after Gd: axial (slice thickness 4 mm, TE=7 ms, TR=634 ms), coronal (slice thickness 3.5 mm, TE=14 ms, TR=560 ms), and sagittal (slice thickness 3 mm, TE=14 ms, TR=630 ms).