

**Supplementary Table 1.** Patient information, recording details and classifier performance. UPDRS: Unified Parkinson’s Disease Rating Scale; DBS: deep brain stimulation; STN: subthalamic nucleus; R: right; L: left; SG: St. George’s Hospital; K: King’s College Hospital; Medt: Medtronic; Boston: Boston Scientific; PRKN mut: heterozygous PRKN mutation.