Conclusion The UMNs are neurons in the central nervous system, located mainly in the motor cortex, that help modulate voluntary movement by influencing lower motor neurons.Future research should focus on expanding sample sizes, incorporating functional imaging, and exploring combined therapeutic approaches to optimize outcomes in diverse UMN pathologies.This review underscores the importance of integrating multimodal diagnostic tools, such as DTI and TMS, with clinical scales to enhance early detection, prognostication, and individualized rehabilitation planning for UMN lesions.Should Remember the UMN lesions disrupt voluntary motor control by impairing descending pathways from the motor cortex, leading to characteristic clinical signs such as spasticity, hyperreflexia, and the Babinski sign.Accurate diagnosis of upper extremity nerve injuries requires a clinical examination and advanced imaging techniques such as magnetic resonance imaging (MRI).Furthermore, elucidating molecular pathways like neuroinflammation opens avenues for novel pharmacological treatments aimed at modulating UMN dysfunction.Clinical signs include spasticity and increased reflexes.