The Cleveland FES Center congratulates Anthony DiMarco, MD and Krzysztof Kowalski, PhD on being featured on the cover of the January 2019 issue of the American Journal of Physical Medicine and Rehabilitation for their article entitled "Complete restoration of respiratory muscle function in three subjects with spinal cord injury."

The respiratory neuroprosthesis, developed in collaboration with Robert Geertman, MD, PhD and Kutaiba Tabbaa, MD, provides inspiratory function by electrically pacing the diaphragm and coughing function through electrical stimulation of the spinal cord.

The diaphragm pacing was successful in maintaining three patients off of mechanical ventilation. The coughing system demonstrated peak expiratory airflow and pressures comparable to normal cough. Subjects reported much greater ease in raising secretion with the coughing function, which is critical in reducing the risk of respiratory infections and other pulmonary complications in the spinal cord injured population.

About the FES Center
The Cleveland FES Center is a consortium of the Louis Stokes Cleveland VA Medical Center, MetroHealth Medical Center, Case Western Reserve University, University Hospitals, and the Cleveland Clinic Neurological Institute. With their support, researchers, engineers and clinicians collaborate together to develop innovative solutions that improve the quality of life of individuals with neurological or other muscular skeletal impairments. Through the use of neurostimulation and neuromodulation research and applications, the Cleveland FES Center leads the translation of this technology into clinical deployment.