

Focal Medical - Apollo system

Session title - The Device is No Longer a Device: Convergence in Medical Technology

Talk title - A New Approach to Focal Therapy for Prostate Cancer

The APOLLO system represents a significant advancement in the treatment of prostate cancer, a leading cause of cancer-related mortality in men. Traditional interventions, such as radical prostatectomy and radiation, often involve treating the entire gland, leading to severe side effects like impotence and incontinence. Furthermore, existing focal therapies frequently suffer from a 25% residual tumor rate due to a lack of precision and heavy reliance on physician skill.

Our purpose is to revolutionize focal therapy through the APOLLO platform, a first-of-its-kind integration of precision robotics, real-time multi-modal imaging (Ultrasound and MRI fusion), and third-generation irreversible electroporation (IRE). This operator-independent system uses AI-driven treatment planning to autonomously position electrodes with sub-millimeter accuracy. Unlike thermal methods, our non-thermal IRE technology destroys cancer cells while preserving critical surrounding nerves and blood vessels, with ablation times of only 2–3 minutes.

To date, we have achieved several key milestones, including the development of a fully functional robotic platform and successful preclinical validation in large animal studies. Crucially, we have secured approval to perform our clinical study at three leading medical sites in Israel. We have already recruited the initial cohort of patients and plan to commence the study in the very near future.

Our future aims include completing this 15-patient First-in-Human study to validate results through MRI and biopsies. Following this, we intend to pursue a pivotal 120-patient trial in the U.S. to secure FDA 510(k) clearance, ultimately scaling manufacturing to establish a global presence in the prostate treatment market.