



CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP101009

Project Title:
MRI-Guided Laser Therapy for Targeted Treatment of Localized Prostate Cancer

Award Mechanism:
Company Commercialization

Principal Investigator:
Gowda, Ashok

Entity:
Visualase, Inc.

Lay Summary:

The primary treatment for prostate cancer has long been radical prostatectomy (surgical removal of the prostate) or whole gland radiation. However, because prostate cancer presents in broadly varying degrees of aggressiveness, recent data show that 42 men who would not otherwise die from the disease must have their prostates removed in order to save one life. Because the complications of prostatectomy (incontinence, erectile dysfunction) are common and devastating regardless of technique used (manual or robotic surgery), it is clear that prostate cancer is being dramatically over-treated. There is growing evidence that patients with low-risk disease may benefit significantly from a minimally invasive focal therapy (treatment of only the cancerous tumor) and avoid complications associated with prostatectomy and other "whole gland" therapies such as radiation. In this CPRIT funded project we plan to complete product development tasks and gain early clinical experience using magnetic resonance imaging (MRI) guided laser therapy for targeted focal (tumor specific) destruction of localized prostate cancer. The Visualase laser technology is fully developed, FDA-cleared, and currently being employed clinically in the thermal destruction of brain tumors. In this project we will develop the accessories required to extend this technique to localized prostate cancer, modify the current software for treatment planning specific to prostate cancer, and perform multi-center clinical studies in collaboration with renowned clinicians at M.D. Anderson Cancer Center and other leading institutions. During these studies patients with both low risk and MRI visible disease, will undergo MRI-guided laser therapy of only the cancerous areas in their prostate. Patients will be monitored for any complications and followed-up over time to evaluate the control of their disease. Upon completion of this project, we will have determined if focal laser therapy of low-risk prostate cancer is an effective treatment approach which helps avoid more invasive surgery and related complications.