Overview of medical applications and cardiovascular intervention

Warren Grundfest, UCLA and Sinai Medical Center, USA

UV laser applications are becoming more prevalent in medical diagnosis and therapy. These wavelengths generally have short penetration depths in tissue which leads to small volumes of excitation for optical diagnostics and small volumes of ablation per pulse for tissue removal. These desirable properties of UV wavelengths have generated interest in new medical applications. However, several technical issues and biological questions must be addressed before this range of wavelengths can be employed for medical use. Each combination of wavelength and medical use requires thorough investigation to optimize energy generation and delivery and demonstrate biological safety and efficacy.