Table III Selected Laser Device Bioeffects[1]

LASER TYPE	WAVELENGTH (μm)	BIOEFFECT PROCESS	TISSUE AFFECTED			
			Skin	Cornea	Lens	Retina
CO_2	10.6	Thermal	X	X		
HFl	2.7	Thermal	X	X		
Erbium-YAG	1.54	Thermal	X	X		
Nd-YAG[2]	1.33	Thermal	X	X	X	X
Nd-YAG	1.06	Thermal	X			X
Gas (diode)	0.78-0.840	Thermal				X
He-Ne	0.633	Thermal				X
Ar	0.488-0.514	Thermal/Photochem	X			X[3]
XeFl	0.351	Photochemical	X	X		X
XeCl	0.308	Photochemical	X	X		

[1]The information in this table is taken from the Laser Institute of America
[2]Wavelength @ 1.33 μm more common in some Nd-YAG lasers has demonstrated simultaneous cornea/lens/retina effects in biological research studies.
[3]Photochemical effects dominate for long-term exposures to retina (greater than 10 seconds).

Table IV Examples of Bioeffects for Selected Wavelengths of Light[1]

Photobiological/Spectral Domain	EYE	SKIN
Ultraviolet C (200 nm- 280nm)	Photokeratitis	Erythema (sunburn); Skin Cancer; Accelerated skin aging
Ultraviolet B (280 nm - 315 nm)	Photokeratitis	Increased pigmentation
Ultraviolet A (315 nm - 400 nm)	Photochemical cataract	Pigment darkening Skin Burn
Visible (400 nm - 780 nm)	Photochemical & Thermal retinal injury	Pigment darkening; Photosensitive reactions; Skin Burn
Infrared A (780 nm - 1400 nm)	Cataract & retinal burn	Skin Burn
Infrared B (1.4 μm - 3.0 μm)	Corneal burn, aqueous flare, cataract?	Skin Burn
Infrared C (3.0 μm - 1000 μm)	Corneal Burn only	Skin Burn

[1]The information in this table was taken from the Laser Institute of America