

Table 1: Basic characteristics of the laser devices according to manufacturer's specifications with λ : wavelength in nanometers, α : (approximate) water absorption coefficient, E_{SP} : energy of an optical pulse in Joule, τ : duration of an optical pulse in milliseconds, f : pulse repetition rate in Hertz, P : (maximum) average power in Watt.

Parameter	Low-power Holmium solid-state laser	Pulsed Thulium solid-state laser	Thulium fiber laser	High-power Holmium solid-state laser
Operating mode	Pulsed	Pulsed	Pulse generation by chopping CW laser beam	Pulsed
Abbreviation	LP-Ho:YAG	p-Tm:YAG	TFL	HP-Ho:YAG
Model	MEDILAS® H SOLVO® 35	Evaluation model	YLR-2000-U	SPHINX®
Manufacturer	Dornier MedTech Laser GmbH, Wessling, Germany		IPG Photonics © IRE-Polus, Fryazino, Russia	LISA laser products OHG, Katlenburg-Lindau, Germany
Laser fiber	Dornier SingleFlex® 400 μm (Dornier MedTech Laser GmbH)		400 μm (IPG Photonics © IRE-Polus)	RigiFib, 550 μm , (LISA laser products OHG, Katlenburg-Lindau, Germany)
λ [nm]	2080	2013	1940	2123
α [mm^{-1}]	3.2	5.9	14	3
E_{SP} [J]	0.1-3.5	0.1-3	0.025-6	0.5-4.5
τ [ms]	0.14-0.45	0.15-1	0.05-12	0.15-0.80
f [Hz]	3-25	5-200	6-1600	4-30
P [W]	35	120	40	100

Table 2: Two objective and two subjective parameters evaluating the enucleation performance by the surgeon using 5-point Likert scale.

Likert item	Subjective Parameters
Speed	I was able to dissect as much tissue as possible in the allotted time.
Coagulation	I could coagulate sufficient tissue.
Cutting ability	I could cut through the collagen fibres effortlessly.
Precision	I was able to fully control the laser energy application process at the given setting. I found that the procedure went smoothly.

Table 3: Formed pocket sizes in square centimeters for each laser setting and laser device. E_{SP} : energy of an optical pulse in Joule, f : pulse frequency in Hertz, τ : duration of an optical pulse in milliseconds, P : average power in Watt.

Laser device	E_{SP} [J]	f [Hz]	P [W]	τ [ms]	Tissue pocket size [cm ²]
HP-Ho:YAG	3	10	30	0.8	4.5
	3	25	75	0.8	8
	4.5	22.3	100	0.15	31.5
	4.5	22.3	100	0.8	2.25
LP-Ho:YAG	2.5	12	30	0.34	4.5
	2.5	12	30	0.41	2
	3	10	30	0.44	2
	3.5	10	35	0.45	6
TFL	0.2	200	40	0.4	0.25
	3	10	30	6	5.25
	3.5	10	35	7	5.25
	4	10	40	8	12
	4.5	8.9	40	9	1
	6	6.7	40	12	0.25
p-Tm:YAG	1.2	100	12	0.40	3.75
	2	50	100	0.6	8
	3	10	30	0.79	3
	3	25	75	0.86	15

