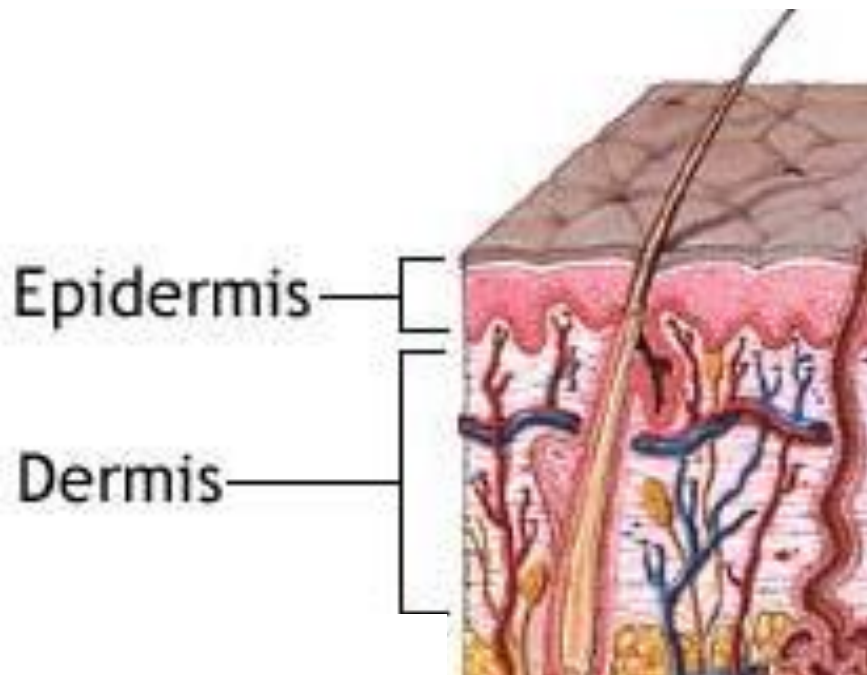


# MicroPulse-1064™ Technology

## A Brief Overview

# Aesthetic Laser Medicine

**Laser energy must penetrate deeply into the dermis to reach targeted skin structures, but without thermally overstressing the epidermal tissue.**

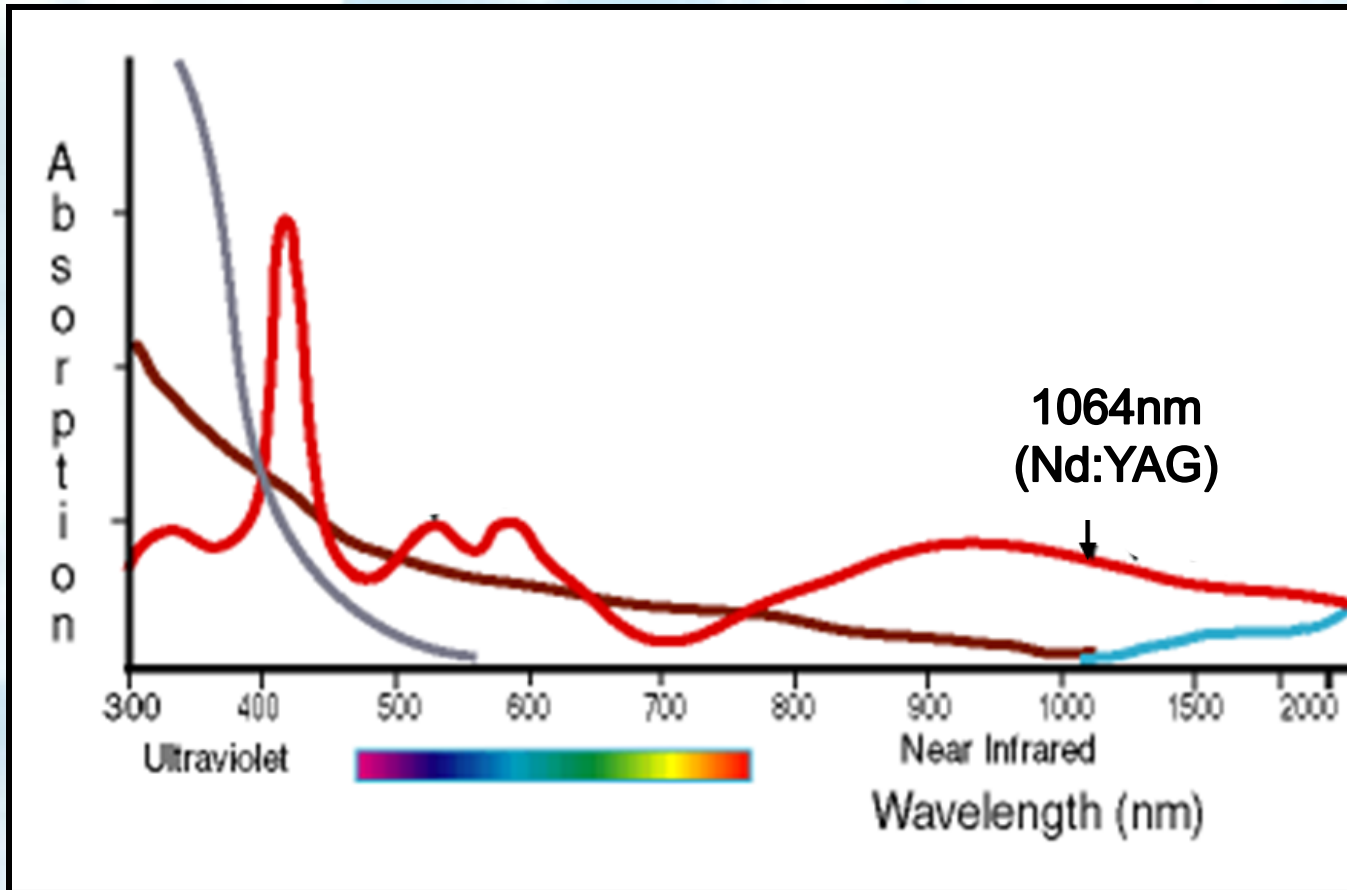


# Aesthetic Laser Medicine

Laser energy is absorbed by specific skin substances called “chromophores”:

- *Melanin*
- *Hemoglobin*
- *Water*

# The Popular 1064nm Wavelength



- Hemoglobin
- Melanin
- Water

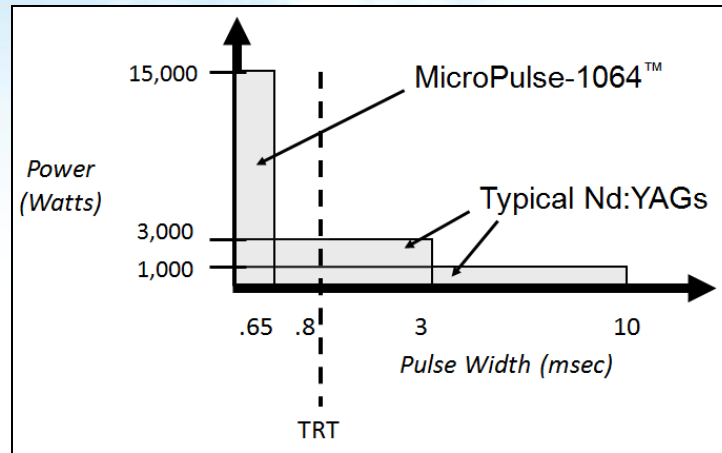
The 1064 wavelength is uniquely absorbed by Hemoglobin, melanin AND water (with relatively LOW melanin absorption.)

# 1064nm Lasers

- The 1064nm laser 'modality' is inherently powerful and versatile, yet much safer than diode lasers, Alexandrite lasers, or IPLs due to its relatively lower melanin absorption.
- The LightPod Neo 1064nm laser enhances BOTH the efficacy and safety of this modality, with its unique **MicroPulse-1064™ technology**.....

# MicroPulse-1064™ Technology:

## What is it?



- **Typical Nd:YAG 1064nm lasers operate with extended pulse durations, i.e. from 3 to 30 milliseconds**
- **MicroPulse-1064™ – exclusive to Aerolase – is a new technology whereby the necessary power can be delivered within a much shorter 0.65 millisecond pulse duration**
- **0.65 milliseconds is below the TRT or ‘Thermal Relaxation Time’ of skin tissue, so the skin has time to cool itself between pulses**

*TRT or ‘Thermal Relaxation Time’ of skin tissue = approx. 0.8 milliseconds*

# MicroPulse-1064™ Technology:

## Why is efficacy higher?

- **Pulse duration is shorter, so energy is delivered much faster into the targeted tissue structures (follicles, vessels, etc.)**
- **Targeted tissue has less time to lose heat through conduction to the surrounding skin, therefore the targeted tissue reaches a higher temperature**
- **A higher temperature in the targeted tissue translates into greater tissue destruction (follicles, vessels, etc.)**

# MicroPulse-1064™ Technology:

## Why is it safer and far less painful?

- **0.65 milliseconds is below the TRT or 'Thermal Relaxation Time' of skin tissue, so the skin has time to cool itself between pulses**
- **Thermal overstressing of epidermal melanin is avoided, thereby reducing risk of burns or pigmentary changes**
- **Thermal overstressing of nerve endings in the dermis is also avoided, thereby reducing treatment pain dramatically**
- **External skin cooling is therefore eliminated, along with the time, mess and cost associated with topical anesthetics, gels, sprays etc.**