

# Creating a Real Medical Femtosecond Laser

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# This is the only medical fs laser



- 200 fs pulse width
- Much closer to 1ps than to 1 fs
- Not good enough

## Shorter Pulse width are required for:

- Medical / Biological Imaging
- Dermatology & Aesthetics Applications
- Surgery

## Medical / Biological Imaging:

Cellular activity happens in the fs scale  
(maybe even attoseconds)



Observe it in Real Time

## Dermatology & Aesthetics:

- Non-linear Processes:
  - Photons Sum
  - Optical Breakdown
- Cold Ablation = Lower Downtime

## Surgery:

- Cold Ablation is the key:
  - No thermal damage = Faster Recovery
  - Less/No Bleeding
  - Less/ No pain => Less/No Anesthesia
  - Faster Operation Time